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ST. THOMAS AND CHRISTIAN PERFECTION

FOR some time, much controversy has raged over a question which is certainly of no small importance in the spiritual life. According to some authors, the whole of the spiritual life, throughout all its different grades, is essentially a unity, while others bring forward grave reasons to prove that what has come to be known as the "ascetical way" is completely distinct from the so-called "mystical ways."[1] There is no need for us to undertake here an investigation into the reasons for these two opinions; it will be sufficient to point out the gradual separation of the sciences of asceticism and mysticism, not merely from each other, but also in many cases from dogmatic theology. Thus, asceticism has come to be regarded as an *a priori* science, while mysticism derives its main principles *a posteriori*, depending as it does on experiences rather than on speculation. However strong the motives for this separation may have been, the direct consequences have not

[1] See, for example, the Conclusions of the Carmelite Congress, Madrid, 1923.

been altogether happy, because one direct result of it has been that the true dogmatic aspect of Christian perfection has been widely ignored. The very word "perfection" has come to be applied almost exclusively to the higher mystical states, while some authors have even gone to the extent of denying the application of it to the essential elements of the spiritual life, such as sanctifying grace, and its accompanying virtues and Gifts of the Holy Ghost.[2]

It has long been the opinion of the present writer that such an attitude is by no means the traditional one in the Church, and that this famous controversy may find an amicable solution, which will be conciliatory to both opinions, in the traditional doctrine as presented by St. Thomas Aquinas. A study of Aquinas' teaching confirms this view. In the first place, his description and analysis of perfection show quite clearly that the possession of sanctifying grace, with its accompanying virtues and gifts, implies not merely a perfection, but *the essential* perfection of the Christian life. Also, the controversy which we have mentioned takes on a new aspect when it is viewed in the light of two distinctions which occur frequently in the writings of the Angelic Doctor. The spiritual life can be considered in two ways, i. e., either as it is in itself, or as it exists in the individual. If we consider that life as it is in itself, or in the abstract as it were, then it is undoubtedly a unity, since it is not subject to the laws of divine providence or predestination, but merely to the ontological laws of its own essence. In this sense we can not speak of two or more distinct "ways" of perfection, one ordinary and the other extra-ordinary, since every single development or manifestation of grace is contained in the ontological essence of that great gift, just as a tree is contained in its seed.

However, when we come to consider this spiritual life of grace not as it is in itself or in the abstract, but rather as it is found in the concrete and in the individual soul possessing it,

[2] Cf. A. Farges, *The Ordinary Ways of the Spiritual Life*, pp. 44-45 (London: Burns and Oates, 1927).

then a very different picture presents itself to our view, and we have now to apply another distinction used by Aquinas, namely, that between what is essential to that life, and that which is accidental to it. On applying this distinction we find in all individual souls one element which is common to all who possess this life of grace, and also another element which is undoubtedly particular to the individual in question. On considering this particular element, we find that in this sense the spiritual life is in no sense a unity, since there are many ways by which God leads individual souls to their own particular degree of perfection according to His divine wisdom and His providence.

As will be clear from this brief summary, the solution to the problem which is proposed in this article rests on two things: (a) the notion of perfection as proposed by Aquinas, and (b) the two distinctions mentioned above between the spiritual life considered in itself and in the individual, and also between what is essential and what is accidental in that life, both of which distinctions are also part of St. Thomas' teaching. We shall examine the two foundations of this solution very briefly.

Three basic elements go to form the complete notion of perfection, according to the Angelic Doctor. Directly and primarily a thing is said to be perfect if its essence or nature is complete and well-formed.[3] Thus, e. g., anyone who possesses the nature of man is in this sense a " perfect man." However, the concept of perfection is applied not merely to the essence but also to the operation or operations by means of which the end or purpose of the essence is attained.[4] Consequently the second element in the notion of perfection is that of the specific operation, and the third is that of the end or purpose for which that essence or nature is destined.[5] Thus a thing is said to be perfect if it attains or, at least, is capable of attaining the end for which it was made.

[3] Cf. *In IV Metaphy.* 16, and *In V Metaphy.* 18.
[4] Cf. *III Cont. Gent.*, 64; *Summa Theol.*, I, q. 73, a. 1.
[5] Cf. *ibid.*, II-II, q. 55, a. 1; I, q. 103, a. 1; III, q. 27, a. 5, ad 2um.

Now it will be obvious at one glance that there is a very intimate relationship between these three elements of the basic notion of perfection; and also that, of the three, the most important is the notion of the end or purpose for which a thing is made. That is why St. Thomas insists so often that " the perfection of a thing is to be judged principally from its end," [6] because both the operation and the nature receive their specification from the end or purpose for which they were created.

Needless to say, God is the only Being who has absolute perfection, while the perfection of creatures is relative, being a degree of participation in that absolute perfection of God. Thus it is that God, in the production of His creatures, can have only one end in view, namely the manifestation of His own infinite perfection. It also follows that, from all eternity, God decreed the exact limits of each individual creature's perfection to fit in with the plan of divine wisdom,[7] and that He then gave to each of these creatures a nature and operation capable of attaining that end. This is true both in the natural order and in the supernatural order. From the beginning God raised his intellectual creatures to the supernatural order, thus giving them a new supernatural end or purpose, the Beatific Vision, which it was impossible for their purely natural powers to attain. Consequently, He also gave them a new supernatural nature, with supernatural powers, so that, by means of this nature and its operations through the infused virtues and the Gifts of the Holy Ghost, the rational creature can attain to its final end, the Beatific Vision. This new supernatural nature we call sanctifying grace, and its powers are the infused virtues together with the Gifts of the Holy Spirit.

It would take us far too long to discuss in full the many effects of sanctifying grace, but one or two observations are necessary for the complete development of the solution which we have proposed. In the first place, sanctifying grace, being

[6] *Ibid.*, II-II, q. 55, a. 1; cf., J. M. Ramirez, O.P. *De Hominis Beatitudine*, Vol. I., p. 158-159 (Salamanca, 1946).

[7] Cf. *In I Perih.*, 14; *III Cont. Gent.*, 1.

a participation of the divine nature, elevates the whole of man to the divine order of things.[8] It is ,as it were, a consecration of the whole of man's being to God, with the consequent effects of adopted sonship and a new presence of the Blessed Trinity in the soul which is rightly called the Presence of Inhabitation. This new presence is, as St. Thomas tells us, a possession of the Blessed Trinity " as the object known in the knower and the beloved in the lover (*sicut cognitum in cognoscente, et amatum in amante*)," [9] which means that God becomes in a very special way the object of our knowledge and love, and that in this way our ultimate end in heaven is possessed in some fashion even in this life. Indeed, Pope Leo XIII writes: " This wonderful union, which is properly called indwelling, differs only in degree or state from that with which God beatifies the saints in heaven." [10]

Now, it should be noted that this complete orientation of the whole of man's being towards God, his supernatural end, is the direct effect of sanctifying grace, even if possessed in its minimum degree. Consequently it is not surprising that St. Thomas should state that " the grace of one individual soul is worth more than the natural good of the whole universe." [11] Thus grace is truly described by the same Angelic Doctor as the " seed of glory " already sown in our souls in this life.[12] Thus it is easy to appreciate the truly great perfection of a soul in a state of grace, and this doctrine which we have just explained should prepare us for the distinction which St. Thomas makes between what is essential to man's spiritual life on this earth and what is accidental.

However, before we can go on to develop that distinction one further point has to be noted, a point which we have already mentioned, namely, that all these wonderful effects are

[8] *II Sent.*, d. XXVI, q. 1, a. 3; *III Cont. Gent.*, 150; *Summa Theol.*, q. 110, a. 2, ad 1um.

[9] *Ibid.*, I. q. 43, a. 3.

[10] *Divinum illud munus*, May, 1897.

[11] *Summa Theol.*, q. 113, a. 9, ad 2um.

[12] *In Joann.*, iii. 36; vi, 40-47.

produced by sanctifying grace even in its minimum degree. St. Thomas is very definite on this point.[13] The reason is clear to see and is at the same time very profound. It is because the least degree of sanctifying grace is sufficient to direct man entirely towards his supernatural end in heaven and to merit that eternal life. Here we have a clear example of an application of St. Thomas' general doctrine concerning the intimate relationship between the end in view and the means to that end, a doctrine which we have already explained. For this reason alone, if for no other, it should be quite obvious that, if we consider this spiritual life of grace in the abstract, then any development of that grace, no matter how wonderful or extraordinary from our point of view, is still only a development of this " seed of glory " planted in us. In this sense the spiritual life is and always will be a unity, because, as St. Thomas puts it, " the first effect of habitual grace is the remission of sins: but it has other effects, since it is sufficient of itself to promote man through all the grades of grace even to eternal life itself." [14] That is exactly what is meant by the essential unity of the spiritual life; yet, as we shall see, it has to be understood of grace considered in the abstract, i. e., as it is in its nature and under the ontological aspect, as it were, and not of grace as it is in the individual.

In order to make this quite clear, we must devote some space to a very brief discussion of the distinction between essential and accidental perfection, as taught by Aquinas. In general, we may say that St. Thomas divides Christian perfection under three main headings, insofar as he says that there are three classes of things which pertain to man's spiritual life on this earth. Some of these things pertain to that life in such a way that without them there can be no life at all, nor can man reach the Beatific Vision without them. Consequently, they are, in the true sense of the word, essential, pertaining as they do to the very essence of all perfection. This is nothing

[13] Cf. *Summa Theol.*, III, q. 62, a. 6.
[14] *Ibid.*, I-II, q. 112, a. 4; III, q. 72, a. 7, ad 1um.

more than a direct application of the first element in the general notion of perfection as we have already explained it. There are other things, however, which do not constitute the essence of perfection, since they are added to it once it is there in the soul, and consequently they are truly called " accidental " to perfection. Lastly, there are certain other elements of the spiritual life which, although added to that life once it is possessed, are not merely accidental. They are more than that because they constitute definite and proven means by which the soul can acquire an increase in its accidental perfection, and so they are rightly called by St. Thomas " instrumental perfection." [15]

The Angelic Doctor himself outlines for us the various elements which go to make up the essential perfection of the spiritual life. Of these elements sanctifying grace is the foundation on which the whole of that perfection is built, this sanctifying grace which, since it is not itself immediately operative, needs the infused virtues and the Gifts of the Holy Spirit as proximate principles of those supernatural operations which can alone earn heaven for man by way of merit. The formal element in this essential perfection is the virtue of charity, both in habit and in act, since it alone directs all the other virtues to their supernatural end. This infused virtue of charity unites us with God, our final end, even in this life, since it leaps over all the bounds imposed by the obscurity of faith and attains to God as He is in Himself.[16] Thus it is that the formal perfection of our spiritual life depends principally on charity and secondarily on the other infused virtues, inasmuch as they are the means by which we can remove the impediments which stand between us and God,[17] and thus increase our love for Him. Once more it must be stressed that this perfect union between the soul and God its Creator and final end is achieved by the minimum degree of grace and charity. We are *all* bound under

[15] Cf. *Ibid.*, II-II, q. 184, a. 2; a. 3, ad 3um; q. 186, a. 2; *III Cont. Gent.*, 130; *In Phil.*, iii, 1.

[16] *Summa Theol.*, I-II, q. 66, a. 6; q. 27, a. 2, ad 2um.

[17] *De Charitate*, a. XI, ad 5um.

strict precept to love God above all things, and this perfection of love is possible to all who are in a state of grace. Thus charity is, in very truth, the " bond of perfection." [18] In this sense, as was pointed out at the beginning of this article, there is in all individual souls who are in a state of grace a common element which is rightly called essential perfection, since it is absolutely necessary in order to attain our final end, and since it and it alone directs the whole of man, even in this life, towards that end. This it does *perfectly*, insofar as all who possess it necessarily love God above all things, and thus fulfil perfectly the precept of perfection. Without it the attaining of the Beatific Vision is impossible, as is our earthly union with that end which we call the Presence of Inhabitation. This essential perfection alone is absolutely necessary for salvation, and it is for that reason that St. Thomas calls it " essential."

When we come to consider what St. Thomas calls accidental perfection, the position is very different. His description of this element of perfection can be summed up in one passage from his writings. He says: " We can adhere to God in this life in a two-fold way. One is necessary to salvation, to which all are bound, namely that man should not set his heart on anything contrary to God, but should habitually refer all his life to him. This way is expressed in those words of St. Matthew, ' thou shalt love the Lord thy God etc. . . .' The other is of supererogation, when someone adheres to God over and above the common state, which is done by removing the affections from temporal things, that thus the heart may approach closer to heaven, because, as earthly desires decrease so charity increases." [19]

By accidental perfection, then, we understand the numerous grades of grace and charity possible to the individual soul; and, although St. Thomas admits that these grades are many, he, like other theologians, divides them into three main classes, that of the beginners in the spiritual life, that of the proficient and, lastly, that of the perfect.[20] Since the Angelic Doctor's

[18] *In Coloss.*, iii, 14.
[19] *In II Philipp.*, iii, 1.
[20] *Summa Theol.*, II-II, q. 24, a. 9; q. 183, a. 4.

teaching on the nature and the causes of this accidental perfection is necessary for a correct understanding of the solution we have proposed, it is worth while developing it here.

He begins by saying that the real reason for the difference in the grades of grace and charity lies in an analogy between the natural and the supernatural orders. Just as, in the natural order, there is a multitude of different forms and grades of perfection according to the different degrees of participation in the perfection of God the Creator, so in the supernatural order of grace there are many degrees and grades of perfection " in order that, from these different grades the beauty and perfection of the Church may shine forth." [21] The analogy in this doctrine is clear enough. He then sets forth the same doctrine under a different aspect, in the form of a principle which Fr. Garrigou-Lagrange has aptly called the principle of predilection: " it is therefore necessary that a thing should possess being or indeed any good, insofar as it is willed by God." [22] And in another passage from his works he states the same thing in a slightly different form: " since the love of God is the cause of goodness in creatures, one would not be better than another were it not for the fact that God wills greater good for one than for another." [23] As a direct consequence of these principles we find his teaching with regard to divine providence, in the course of which he proves that everything, great or small, falls under the care of that providence.[24] He follows this up by his doctrine on predestination, which for him includes all the different elements and circumstances of man's life, whether natural or supernatural.[25]

All these great doctrines form, as it were, the background to St. Thomas' teaching about the nature and causes of the different grades of accidental perfection. It is when he comes

[21] *Ibid.*, I-II, q. 112, a. 4.

[22] *Ibid.*, I, q. 20, a. 2.

[23] *Ibid.*, q. 20, a. 3.

[24] *Ibid.*, q. 22, aa. 1-4; *De Verit.*, q. 5, a. 3.

[25] Cf., Garrigou-Lagrange, O. P. *De Deo Uno* (p. 530), for a complete scheme of this idea of predestination.

to apply this general doctrine to the question of the fullness of grace given to Christ, the Blessed Virgin, and the other Saints that he reveals quite clearly his mind on this subject of accidental perfection. Here he repeats time and time again that the grade of grace and of charity depends in the first instance, and above all, on the divine will.[26] He speaks of the " limits fixed by God," of the " divine ordination to a higher or lower state of life "; then he concludes: " the first cause of this diversity [of graces] is to be found on the part of God, who dispenses his gifts of grace in a different way to each, in order that, from these different grades, the beauty and the perfection of the Church may shine forth." [27] Nor does St. Thomas leave it at that, because he goes on to give us the true metaphysical basis for this efficacy of the divine causality,[28] and also to show how it depends too on the merits and the grace of Christ, who is the Head of the Mystical Body. Thus he says: " There is not one of us who is not made a partaker of the divine graces . . . but this grace is not given to all in a uniform way nor equally, but according to the measure of Christ's gift, i. e., insofar as Christ is the giver and has measured it out to each individual . . . this difference is not from chance or blind fate nor from our own merits, but from the gift of Christ, i. e., according as Christ has measured it out to us." [29]

It will be very obvious that this conclusion is no more than a particular application of Aquinas' general doctrine with regard to the divine causality. God's intention in the whole of creation is to manifest His own glory and infinite perfection by means of creatures. This means that, since the infinite perfection of God can not be adequately manifested in one or a few individuals, He attains that end by the diversity of perfection of those creatures both in the natural and the supernatural orders.[30]

[26] Cf., *Summa Theol.*, III, q. 7, a. 10.
[27] *Ibid.*, I-II, q. 112, a. 4.
[28] *Ibid.*, III, q. 7, a. 12.
[29] *In Ephes.*, iv, 4; cf. *In Rom.*, xxi.
[30] Cf. St. Francis of Sales, *The Love of God*, Bk. IO. Ch. 6.

This perfection of the divine causality in no way implies a loss of man's freedom, and so, under the guiding hand of God, he must play his part to the full in the increase of his own accidental perfection. He must learn to cooperate with those graces which he receives from God, thus removing obstacles to the future workings of that grace. Above all, he must be fully prepared to make any sacrifice which God may ask of him in order to reach the full heights of grace and charity if that should be the divine will for him.

Thus, in this distinction between essential and accidental perfection we can find a solution which will bring the two conflicting opinions with regard to the unity or diversity of the spiritual life into harmonious concord. If we consider the power of grace in the abstract, in its nature, so to speak, and apart from the circumstances in which it is found in individuals, then that spiritual life is essentially a unity, because the least degree of grace not only unites us perfectly even in this life with God, our supernatural end, but is also capable of developing through all the different grades of the spiritual life from the lowest up to the highest, even to the beatific vision itself.

If, however, we think of that grace as it is in the individual soul then once more we must distinguish between the element which is common to all namely grace with its accompanying infused virtues and gifts, and the accidental grade of that grace and charity, which is particular to each and every individual. This grade of grace will depend on the will of God with regard to the individual, and in this sense we can not speak of the spiritual life with truth as a unity, first of all, because, by means of its very diversity in the individuals who possess it, the infinity of the divine perfection is manifested in a splendid manner and, secondly, because the will of God is the true factor which determines both the manner of grace and its grade where the individual is concerned. Hence we can truly say that there are as many grades as there are individuals, and that, so far as the " way of perfection " is concerned, God leads some by one path and some by others according to His will.

This solution which we have outlined here has many direct applications in the spiritual life, and here it might be as well to mention some of them. First of all, there is the famous question about the universal call to perfection. Usually authors deal with this question as if it referred merely to accidental perfection, whereas once more there is need of the distinctions we have proposed, because our solution to this question will vary accordingly as we consider essential or accidental perfection.

If we are considering the call to essential perfection, we have to keep in mind the doctrine of the Church with regard to the will of God that all should be saved (with St. Thomas' famous distinction between the antecedent and the consequent will), as well as the doctrine of divine providence and predestination. This is quite clearly St. Thomas' position with regard to this question.

When we come to consider the question in the light of accidental perfection—and in particular when we consider the question of the call to infused contemplation—then the solution proposed in this article has direct application. Thus, in the abstract, since all are called to sanctifying grace, which is the means necessary for the Beatific Vision, all are similarly called to infused contemplation remotely and in the abstract, since grace contains in itself the power to carry man through all the grades of the spiritual life up to that very vision itself. In the concrete, however, since we are now dealing with that grace as it is in the individual soul and, moreover, with the accidental grades of it, the call of any individual soul to infused contemplation will depend on the will of God. He calls to that state those whom it pleases Him to call, and how and when He pleases. To propose any other solution to this problem is to go contrary to the mind and the letter of Aquinas, as we have seen.

It will be obvious too that the solution we have proposed also helps to explain what is usually called the "precept of perfection," [31] because it will be clear that all those who possess

[31] Cf. *Matt.*, vi, 48.

essential perfection as we have described it in the course of this article can and do love God above all things, with their whole hearts, souls, minds, and strength; consequently, they observe the essence of the precept perfectly.

Nor does this mean that we can neglect or in any way despise accidental perfection. Such is very far from St. Thomas' thought. On the contrary, since the precept of the love of God above all things deals directly with our final end, we should desire always to fulfil that precept in an ever higher degree, even though some of those higher degrees are not under our own immediate control, but are God's gift in accordance with the dispositions of His divine will. It is for this reason that St. Thomas insists that, unlike the moral virtues, there is no " mean " in the action of the theological virtues, because they have for their direct object God, the Infinite Good.[32] Thus we can never love God as much as He deserves to be loved, no matter what our grade of grace, charity, and sanctity may be. For this reason, too, he insists on what we may call the " law of acceleration " in the spiritual life, when he says: " those who are in a state of grace should increase in that grace ever more and more according as they approach their final end," and this increase should proceed at an ever growing pace, much as a stone, flung into the air, increases its speed as it nears the earth which is attracting it by the force of gravity. That is our obligation, and God's grace will always be with us to enable us to fulfill it.

The very delicate and debated question of passive purgation after death also finds an answer in this solution. Some authors maintain that those souls who have not reached the heights of accidental perfection in this life, but who have died in the state of beginners will be obliged to pass through purgatory in order to acquire the passive purgation and the accidental perfection proper to souls who have passed through that purgation in this life and have thus reached the stage of those we have called the perfect.

[32] Cf. *Summa Theol.*, II-II, q. 184, a. 3, ad 2um.

It is clear that there are really two questions involved here, one of fact and the other of possibility, and we can attempt to answer them both in the light of the principles we have already explained. With regard to the question of fact, i. e., whether *de facto* such souls have to pass through purgatory *simply* to acquire that passive purgation which is proper to the states of the proficient and the perfect, we can answer at once that at least all such souls do not have to pass through purgatory, since baptised children who die before coming to the use of reason, and also martyrs for the faith, enter at once into the Beatific Vision. Also there is no valid reason for stating this fact of passive purgation after death merely for the purpose we have mentioned, provided that we are not all bound to reach the stage of the perfect in this life. As we have seen, these higher states are a gift from God, and their graces are dispensed according to His good pleasure. Indeed, the whole doctrine of purgatory as it is taught by the Church seems to imply that those who die without sin or the debt of punishment due to sin on their souls need no further purification before entering heaven. So much for the question of fact. Now, with regard to the *possibility* of entering heaven immediately after death, we have to keep in mind the fact that there are many ways and means open to us in this life by which sin and the punishment due to sin may be removed from the soul. Once we admit that this active purification is possible here below, then we are forced to admit at the same time at least the possibility of entering heaven immediately after death. This is especially true in the light of the principles we have already explained in the course of this article, because, if the grade of accidental perfection in the individual depends on the will of God, He will not demand from us a perfection greater than that which He has willed for us. Thus it would seem that, provided we do what we can to cooperate faithfully with the graces we receive from God in this life, and also do what we can to atone for our sins in this life, using the abundant means He has placed at our disposal through His Church, it should be possible so to live

that we may enter heaven immediately after death. The contrary teaching seems to demand from us more than we can give, which is contrary to God's normal method of acting in the souls of His creatures.

Our aim in this life, then, should be to live faithfully in loving service of God, each according to his state and degree of grace, prepared always to leave all things to follow Christ if such should be His divine will, desiring to love Him ever more and more. Thus, star may differ from star in brightness in heaven, but that very difference will only redound to the greater glory of God Whose divine will we have fulfilled.

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IDEALISM: THE PRIMACY OF THE GOOD

WHEN Kant concludes that the nature of mind is necessarily dialectical in regard to its highest objects, and that therefore it can never make any assertion about these objects without at the same time being aware that it may with equal validity make the contradictory assertion, we may take issue with him for having done what he says could not be done, viz., for having made a conclusion about the noumenon. If, however, he would restrict his statement to saying that the history of mind reveals it taking dialectically opposed positions, we could go along with him. For, as a matter of fact, the history of the mind's odyssey does reveal that it has set out to search identical objectives, but has beached upon the most diverse shores, confident that there it has found its goal. In this paper we are interested in attempting to understand why one of the traditional courses pursued by the mind is what has come to be called " Idealism," and in attempting to come to some conclusion about the validity of such a course.

In general, all in the tradition agree that the function of mind is specifically thought. But it is inaccurate merely to say that thought is the function of mind, for thought presupposes a factor other than mind. Thought, it is true, is the function of the mind, but being thought is the function of the object as intelligible; and since there is never a thinking without a being thought upon, thought, consisting of these two elements, supposes a thinking subject and an object that is thought about. Thought, therefore, is a bipolar phenomenon, a relation. Like all relations, the continuance in being of thought depends upon the stability or transitoriness of the terms constituting the relation. But since the kind and act of existence in thought is formally conditioned by mind, which like all formal principles

comes to be fully only by determining an act of existence, an unstable relation means that the mind does not fully realize itself, while a stable relation gives the mind the possibility of existing fully. But if it is the mind that accounts for the formal perfection of this relation of thought, and if in the existence of thought mind finds its perfection, we cannot account for the instability of this relation by attributing it to mind. For that would mean that the same formal principle was responsible for both the perfection and lack of perfection of thought. Therefore, limitation in the perfection of thought must be from the part of the object thought about, since it is the only other conditioning principle in the existence of thought.

From this we can further deduce that since the mind's coming to be in thought is somehow dependent upon something extrinsic to mind and to the mind's act of existence—viz., the object—the mind will be related to the object as to a contrary, as knower to known. There are, however, two possible ways in which contraries can act upon each other: " (a) the extinction of one of two contraries by the other, or (b) the maintenance of what is potential by the agency of what is actual and already like what is acted upon, with such likeness as is compatible with one's being actual and the other potential." [1] Now, since we have already seen that the mind's functioning, which is its actuality, includes as essential aspects itself and the object, obviously the kind of interaction exercised by the object upon the mind, as that of one contrary on another, will fall under type (b).

Therefore, as an essential condition for the mind's full existence, we can posit that an agent-patient relationship must exist between mind and object, and the object must be actually what the mind becomes materially, or contentually, in an act of knowledge. This seems to demand that the object be as intelligible material prior to its actually being known by the mind, i. e., before it comes to exist as fully known by the same act of existence whereby the mind comes to exist as fully know-

[1] Aristotle, *De Anima*, 417b, 3-5.

ing. Moreover, we can further postulate on what we have laid down before, that the agency of the object of knowledge will determine the durability of the existence of the relation constituting knowledge, for the less the intelligibility of the object, the less able is it to serve as an intrinsic element of an enduring relationship in which the mind reaches its own proper existence, knowing.

These premisses that we have so far established are agreed upon in general by what we call Idealists, as well as by other theorists of knowledge. Divergences, however, begin to arise when the nature of the agent-patient relation arises. This relation occurs in what generally is called experience. Again, none deny that experience is a *sine qua non* condition for knowledge. But at what level of experience does this relation have the necessary residuum of intelligibility in the object so that the relation may truly be said to be a cognitional experience?

Let us see what the Idealist thinks of experience at the level of sense. Obviously, the most immediate example of an apparently cognitional experience occurs at the level of the sense. There we undoubtedly have an agent-patient relationship existing between the object and the sense, and this relationship is necessarily bipolar; moreover, the visible or audible object is actually so when the sense of sight or of hearing is activated. But, is this a cognitional experience? Remembering what was said above about the actual existence of a knowing power being dependent upon the continuance in existence of the relation between it and its object, and remembering that we then postulated that the duration and validity of this relation was primarily the effect of the object's existence as intelligible, we must conclude that the relation in the case of sense knowledge is questionable in its ability to serve as a term for a truly cognitional relation.

In the first place, the object of sense knowledge is a unique, contingent, here—and—now being; its intelligibility as a sense object does not constitute its preter-sensible quiddity. This means that what it is sensibly in no way enables us to know how it is determined in its substantial existence, for the prin-

ciple of determination of existence at that level—the essence—is necessary, universal, eternal, whereas what we know in the sense experience has all the marks of time and place, the matrices of constant change. Hence, the Idealist concludes, the original cognitional experience can not be said to occur at the level of the senses, for there the object is found to be affected by all the predicates of being that are contrary to the kind of existence proper to and demanded by the mind.

In the second place, the Idealist feels, the infinite dependence of this relation between sensible object and sense power on contingent physical factors, and the utter lack of any criterion of a cognitional nature whereby to judge the conditions requisite for a proper relation between sense and object, must cause us completely to discard experience at the sense level as the original cognitional experience. Consequently, the only validity that can be given to sensation is a practical one. Sense knowledge is, therefore, explained and validated in terms of pleasure and pain. That is to say, sensation is the means used by a physical, finite being to orientate itself to a given context composed of other physical, finite beings. For the sensing subject this context has no significance other than as it tends to preserve or destroy his physical being, and, therefore, he is aware of it in terms of pleasure or pain, aversion or desire. The means of awareness is sensation which serves merely as an instrument for the arousal of an affective attitude. Hence, sensation is validated in terms of appetite; cognitionally considered, i. e., in terms of the mind's life, it is worthless.[2]

[2] It is worth noting here that this appeal to an extrinsic factor, usually one to be classed under some aspect of Good, to validate the cognitional experience, recurs in Idealism even at the level of the mind.

Descartes gives good expression to the utilitarian concept of sensation: "Principle III: *That the perceptions of the senses do not teach us what is really in things, but merely that whereby they are useful or hurtful to man's composite nature.* It will be sufficient for us to observe that the perceptions of the senses are related simply to the intimate union which exists between body and mind, and that while by their means we are made aware of what in external bodies can profit or hurt this union, they do not present them to us as they are in themselves unless occasionally and accidentally. For after this observation we shall without difficulty set aside all the prejudices of the senses and in this regard

Since the Idealist's analysis has brought him to the point where he can no longer count sensible being as capable of giving rise to a cognitional experience, he can draw further conclusions about the intelligibility or scientific worth of the totality of sensible being. This means, in effect, that he will be delivering ontic judgments on Nature.

Sensible being has traditionally been considered to consist of the quantitative, qualitative, and relational existence enjoyed by composite finite being. This means that it is a form of existence necessarily accruing to composite being because of its nature. But although the categories in which sensible being expresses itself are fixed and the same for all—viz., quantity, quality, and relation—yet the modes in which any sensible being will express itself in these categories, are completely indeterminate. This means that although it is true that all material things must have extension, the quantity of that extension is completely contingent; and the same holds true of the modes of expression in the other categories.

It follows, therefore, that the composite things actually existing in Nature, complete with their modal determinations of the categories of quantity, quality, and relation do not afford us scientific material. For these modal determinations are accidents in the fullest sense of the word, by which is meant that they are accidents in the primary sense of that word: "'Accident' means (1) that which attaches to something and can be truly asserted, but neither of necessity nor usually, e. g. if some one in digging a hole for a plant has found treasure. This—the finding of treasure—is for the man who dug the hole an accident; for neither does the one come of necessity from the other or after the other, nor, if a man plants, does he usually find treasure." [3] Concurring completely with Aristotle in his analysis of one possible meaning of "accident," the Idealist

rely upon our understanding alone, by reflecting carefully on the ideas implanted therein by nature." Descartes, *The Principles of Philosophy*, Pt. II, Princ. III, translated by E. S. Haldane & G. R. T. Ross (Cambridge, at the University Press, 1931), Vol. I, p. 255.

[3] Aristotle, *Metaphysics*, 1025a, 13-16.

goes on to say that since Nature as given to us in experience is nothing but a totality of composite beings apprehensible immediately by us only in terms of modal determinations of the universal categories, and that since these modal determinations are not due to necessary relations between that which caused the modal determinations and the modal determinations considered as effects of the cause, and that since for scientific knowledge a necessary causal relation is required of Nature, considered as a whole of sensible accidents, there can be no science.

What then happens to the natural sciences which are *par excellence* the sciences of Nature considered as sensible or phenomenal? They cannot entirely be disavowed because the fact of the matter is that men do occupy themselves about natural phenomena and attempt to reduce them to some sort of orderly body of knowledge. But the task considered as a task of knowledge is essentially fruitless because it is self-contradictory. To what stable principle of causality could this endless flux of modal determinations be reduced? There is one principle that is stable but it is, as we have seen before, a non-cognitional criterion. We can validate natural, or empirical, science in terms of human usefulness. This means that we will validate the life of the mind as knowing sense-phenomena in terms of the Good, and thus will make meaningful a study of sense-phenomena. The study of Nature, therefore, will become a process whereby we hope that man can come to control the unpredictability of Nature, the non-human protagonist eternally present in the human drama. By growing more in the power to predict Nature, man will thus render himself free of the peril to his existence from unforeseen sallies on Nature's part. What will enable us to control Nature will constitute natural science, whose truth then becomes completely contingent; for its truth consists in a working hypothesis enabling us in any given situation to escape the threat of Nature whose power we will be able to use for our own ends. It follows, therefore, that truth *qua* knowledge is not obtainable nor ultimate in the order of natural science, but it is always

subordinated to the ultimate goal of usefulness, which is the only criterion recognized in judging of the validity of natural science propositions.[4]

Having discarded the possibility of a self-validating science of Nature considered phenomenally, or sensibly, which is constituted by the modal determinations of the categories of quantity, quality and relation, the Idealist does not abandon Nature as a complete cognitional zero. Rather he approaches it from the angle of the three categories enumerated above. And here he finds a guarantee in Aristotle that this approach will net him scientific knowledge. For although quantity, quality, and relation are accidents, yet they are so in an other sense than that noted above: "'Accident' has also (2) another meaning, i.e. all that attaches to each thing in virtue of itself but is not in its essence, as having its angles equal to two right angles attaches to the triangle. And accidents of this sort may be eternal, but no accident of the other sort is." [5]

But here the Idealist must effect a reduction. The only accident that, though not constituting the essence of Nature, yet is everywhere found with it is quantity—for, after all, Nature is the totality of bodies. Hence, the science of Nature will essentially be a science of quantity, the determining principle of body as such. Qualitative aspects will enter into it only to the extent needed to differentiate one species of quantity from another. The category of relation will obviously function as an expression of the relation of one quantity to another. Nature thus known becomes a science of quantity or extension, i.e., the science of mathematics. In the existence the mind has in mathematical knowledge it finds for the first time its sure and firm possibilities for life. For the mind, as a being that can become, that is not *per se* complete actuality, finds when dealing with mathematics that it is dealing with the pure conditions of becoming. For the mathematical object expresses not that

[4] It is interesting and hopeful to note that this position expressed here in radical terms, seems to be much less prevalent among contemporary natural scientists than it was some fifteen or twenty years ago.

[5] Aristotle, *Metaphysics*, 1025a, 30-33.

which becomes, but the possibility or condition of becoming for the mind, because the mathematical object as such can exist only as known and hence most formally its existence is to be as a condition of the mind in its becoming as knowing.

In Geometry, our object is the formality of simultaneity, whereas in arithmetic our object is the formality of priority and posteriority. Both of these attributes are requisite as conditions for the existence of quantity. Hence, if we can not explain both simultaneity, and priority, and posteriority, we cannot give a scientific explanation of quantity. Quantity demands this double explanation because of the specifically different modes in which it can be: continuous or discrete. Yet these two modes of quantity have a necessary relationship to each other. For since quantity to be such must be able to exist under both modes, each must furnish the conditions for existence of the other. Therefore, insofar as we consider quantity as continuous we must explain the conditions and nature of simultaneity, and that is the function of the geometer. For continuous quantity is after all the simultaneous existence of designatable quantative parts, any one of which may, by being actually designated, become in its turn an actually existing continuous quantity. Hence, there can be no limitation put upon the possibility of ever more simultaneously existing continuous quantities.

But the problem of the condition of the designation of parts is not the function of the geometer, for in designating a part we are concerned not with the possibility of simultaneity but rather with the problem of exclusion. Hence, this problem of designation of parts is handled by the arithmetician who, in expressing the formality of designation, causes the possibility of simultaneity to be. For how could simultaneity be if there were no possibility for a manifold to be? Therefore, while the geometer expresses the conditions admitting of simultaneity, simultaneity could not be actual until the arithmetician had designated for us the manifold. Thus the arithmetician's designation of parts which are related to each other as before and after, by the use of a number series, brings into actuality a simultaneously existing manifold.

Since, then, the mind is a becoming knowing power, and since the objects of mathematics, although themselves not able to become, yet exist as such only when determining as conditions this becoming knowing power, this union of the mind and mathematical objects affords full existence for the mind. For it is a knowledge that combines a power capable of endless becoming with eternally stable conditions of becoming. Hence, given the unvarying and limitless conditions or possibilities of becoming (the mathematical objects) the mind can endlessly come to know within these conditions. For if the mathematical objects as such exist only as the conditions of the mind's coming to be in their regard, for them to put an intrinsic barrier to the mind's knowing with them as its objects, would mean that these objects, whose existence as such comes only from being known, would limit their own existence, thus serving by reason of their nature as the principle of their own existence and non-existence. But this is obviously absurd. Moreover, we can not find in this relationship anything that will militate against the mind's coming to know with absolute certainty, i. e., against the mind coming to exist fully within this conditioned context. For here we have only two factors involved: the stable conditions or possibilities of the mind's becoming, and the mind itself which becomes in knowing these conditions. But in becoming the mind is merely becoming itself, i. e., becoming knowing actually, and its becoming is conditioned only by objects which, as we have seen, are as such only when serving as conditions of the mind's existence, which means they are as such only when the mind is in knowing. Therefore, the becoming of this relation between mind and mathematical objects necessarily is a coming of the mind into its full existence. Hence, in mathematics the Idealist finds an existence that is most proper to the mind and, consequently, it can properly be called knowledge.

We have seen that Idealism splits Nature into two distinct cognitional departments. One of these it assigns to the natural sciences, the empirical disciplines, and validates these " sciences " by reason of a criterion of usefulness. This depart-

ment is concerned with the qualitative aspect of Nature, and about it the Idealist reasons thus. If, they say, there are qualitative distinctions between bodies, it is highly problematic whether such exist formally in the bodies, or whether they are not merely there in subjectively imposed form. And even if they are there, since they do not *per se* appear from an analysis of body, they can not, therefore, help us to know anything about Nature which consists of bodies. However, these qualitative aspects of Nature will enable us to handle Nature better if we have some knowledge of them, and, therefore, such knowledge is valid insofar as it enables us to be able to predict about Nature with ever greater possibilities of certainty as to the outcome of any given situation.

The other cognitional department into which Nature falls is afforded by that which is a property of body, viz., quantity. And this is truly the science of Nature for the Idealist. For here we can know with certainty how Nature is—insofar as it is quantitative. For quantity as such to be, nothing more is needed than to have through a consideration of the nature of quantity a knowledge of the conditions and possibilities for the existence of quantity. Knowing these possibilities, the mind can then set to work to give them being as being known, and in this giving being to them, it simultaneously comes to be in the same act of existence. The conditions of quantity are eternal and immutable, their existence as such occurs only together with that of the mind as knowing, hence, there is no possibility for the mind failing to exist fully when such a being is its object.

However, although the Idealist has thus split Nature into two irreconcilable parts, he has at least in this phase of investigation encountered a true cognitional experience. For in encountering quantity he has met with the necessary conditions for the mind's existence as a knowing power. Here in Nature considered as mathematical there is no need to validate the mind's function in terms of anything other than this very function. Yet this original cognitional experience has occurred not at the level of Nature considered as the realm of the

sensible or movable, but rather at the level of Nature considered as mathematical, i. e., considered as a form of existence that does not admit of any change nor of any existence as such, except insofar as it exists in knowledge. Moreover, since quantity, as we have noted before, is an accident of Nature in the sense of a property, there is still the question of that of which it is a property. That of which quantity is a property serves as the foundation of change, and as the foundation of Nature as it exists independently of the mind, and this foundation is matter.

Matter is the object of faith for the Idealist, for he can not comprehend as a scientific object an object whose whole being consists in becoming. Hence, to handle this substratum of Nature he will have recourse to various extra-natural principles to validate its existence. Thus Plato considers it as a principle of non-being which, together with a principle of being serves to constitute objects proper to opinion. Since it is a principle of non-being its cognoscibility must consist in something other than its tendency to be, for it cannot become in the sense of becoming being, since it is non-being. Hence, its becoming will be in terms of some principle other than being, and that principle will be the Good. But as a principle of becoming it can never fully become good, for that would mean that it would cease to be. Hence, the Platonic principle of matter is eternally relegated to the sphere of endless becoming in regard to the Good, and thus, since it never can become good, it can never be, and thus can never be knowable. It is then the constant principle of unintelligibility, the enemy or contradictory of Form.[6]

For Descartes matter is extension, and thus he evades the problem of what is the substratum of extended being.[7] For Kant matter " is nothing but a mere form, or a certain mode of representing an unknown object by that intuition which we call the external sense. There may, therefore, well be something

[6] Cf. Plato, *Republic*, V, *passim*.
[7] Descartes, *Principles*, Bk. II, Princ. I.

outside us to which the phenomenon which we call matter corresponds; though in its quality of phenomenon it cannot be outside us, but merely as a thought within us, although that thought represents it through the external sense as existing outside us. Matter, therefore, does not signify a class of substances totally heterogeneous and different from the object of the internal sense (the soul), but only the different nature of the phenomenal appearance of objects (in themselves unknown to us), the representations of which we call external, as compared with those which we assign to the internal sense, although, like other thoughts, those external representations also belong to the thinking subject only." [8] Hence, this original cognitional experience in which the Idealist finds the necessary cognitional residuum for the mind's existence to come to be fully, is found not in Nature considered as the realm of the movable, but in Nature considered as quantitative or mathematical, a Nature in which the principle of becoming is not a perfection of its being, but rather is a phantom intruder, an imperfection to be done away with by a process of mathematical abstraction.

But although mathematical knowledge is the original cognitional experience of the mind, the Idealist is aware that it is original only in point of time or generation of knowledge, and that it is not original in point of ultimate validation. For let us grant that in mathematical knowledge there is nothing but the pure work of the mind, and that the mathematical object as such is only when the mind knows it, which certainly seems to remove all possibility of error, for how could error come to be unless the mind brought it to be. But this is contradictory, for it would mean that the mind in coming to be had ordained its own non-being. Yet that is the very problem that must be faced. For the mind is not at rest in mathematical knowledge. Since, although the mind can be certain that the mathematical being as such is when it is known because its existence

[8] Kant, *Critique of Pure Reason*, translated by Max Muller (New York, MacMillan and Co., 1924), p. 312.

as such depends upon being known, and therefore the mind and the mathematical being are by the same act of existence in knowledge, yet how can the mind validate its own existence in knowing? For it has not as yet validated its own existence as such in knowing. It can not appeal to mathematical knowledge as the ultimate validation of its ability to be as knowing because mathematical objects are, after all, dependent in their being upon being known; hence, their act of existence is identical with that of mind. The mind must, then, find some criterion that conditions and insures its own existence, that does not depend upon it for its existence, and that does not come to be only when the mind's existence comes to be.

Recognizing this need, Plato put mathematical knowledge in the first category, in the realm of mind, that designated as understanding. For he said that men with this knowledge operated on postulates for which they could not give the reasons, and insofar as they could not give reasons for the original postulates from which they drew their conclusions, they were not really knowing. They differed from men of opinion whose first principles could never be validated because their first principles were becoming, non-being; but insofar as the mathematicians shared with them in not having validated their first principles—although these admitted of it—they were still not to be called men of knowledge. For the mind could not account for its existence as such when its only existence was that of mathematical knowledge. Hence, over and beyond the realm of understanding, came the realm of intellection or reason, which was reached when the mind apprehended the hegemony of the idea of the Good. To apprehend the Good was to know it as the principle accounting for the perfection of all things, the primary perfection being the existence of the thing. Hence, when the mind apprehended the Good as being of this nature and as being the supreme principle of all, it could be certain that its own existence as knowing was not illusory but was its most proper existence.

This means in effect that because all things are subordinated

to the principle of the Good, the mind could be certain that it knew. For the principle of the Good, in ruling all that is, ordains that each thing should come to be what it is. And since the mind is when it knows, the principle of the Good assures the mind of knowing. Insofar as the mind knows it can not be sure that it enjoys the existence proper to it, but it can be certain of this only insofar as it knows that there is an extra-cognitional principle, the Good, ordering all. Hence, the ultimate validation for the existence of the mind—for knowledge—is not to be found within either the object of knowledge nor in the knower, but in a principle extrinsic to both, in a principle determining that it is better for a thing to be than not to be.[9] Thus existence becomes subordinate to Good for things are not good because they exist, but they exist because it is good for them. Hence, the existence of the mind as knowing is validated ultimately in terms of Good, and for it to know why it exists, which is to know why it knows, which is to know the cause of its knowledge—and this is scientific knowledge—is to know that it is good for it to be. And thus for Plato the final answer to the mind's existence is enveloped within the universal criterion that it is better for a thing to be than not to be. Not the object, not the nature of the mind, but the goodness of the existence of the mind, which results in the relation between object and mind, must serve as the final conclusion on why the mind knows.[10]

For Descartes, on the other hand, the ultimate validation of knowledge was God's goodness. In the *Discourse* Descartes gives a genetic explanation of how he arrived at the idea of God as the ultimate validation of the mind's being. He states that the first clear and distinct idea of which he was aware was himself as being in the mind's act of doubt. But since he was aware of himself (whom he now identified with mind) as being only in an imperfect way, for he was not as knowing simply, but as knowing insofar as he doubted, he was faced with

[9] Cf. Plato, *Timaeus*, 29 E-30 B.
[10] Cf. Plato, *Republic*, Bk. VII, *passim*.

a problem. Insofar as he had a clear and distinct idea of himself as knowing himself in an act of doubt, he had knowledge, i. e., he existed fully as mind. But insofar as the object of the clear and distinct knowledge was the same as the subject, and insofar as this object was not *per se* a knowing but a doubting being, he had to account for its possibility of passing from an imperfect existence. Now since he found no contradiction in conceiving of a being who would be aware of itself not as a doubting but as a knowing being, he could then posit a being that was knowing as such, and not merely knowing as doubting. But he could not account for his knowledge of such a being by reference to his own thought, which manifested of itself the imperfection of doubt. Hence, any idea of a being who always knew itself as knowing and never as doubting, must be the result of a being distinct from himself (Descartes). Therefore, since Descartes had the idea of such a being, this being must exist independently of Descartes' thought.[11]

But although he had thus proved the existence of such a being, and had thus accounted for his idea of this being, yet how could he be certain that this being was not deceiving him? And this question he answers definitively:

> For, first of all, I recognise it to be impossible that He should ever deceive me; for in all fraud and deception some imperfection is to be found, and although it may appear that the power of deception is a mark of subtility or power, yet the desire to deceive without doubt testifies to malice or feebleness, and accordingly can not be found in God. In the next place I experience in myself a certain capacity for judging which I have doubtless received from God, like all the other things that I possess; and as He could not desire to deceive me, it is clear that He has not given me a faculty that will lead me to err if I use it aright.[12]

In other words, we are back to the principle of Good to explain the validity of knowledge. Because God has all perfection and, therefore, is infinitely Good, it would be an imperfection in Him if there existed as a result of his causality a knowing power

[11] Descartes, *Discourse on Method*, Pt. IV.
[12] Descartes, *Meditations*, IV, Vol. I, p. 172.

that could never come to be as it should be, viz., as knowing. Therefore, because God is infinitely good, it is certain that the mind (which is the same as man) can know.[13]

For Kant the validation of knowledge or of the mind's existence follows a somewhat different course than that of either Plato or Descartes. For both of them the existence of the mind in knowledge was validated by a principle extrinsic to either the mind or the object, by a principle of Good. Kant, however, is somewhat different—but I think it is only a surface difference.

Kant's original cognitional experience is the result of the reduction to intelligibility by means of the categories of the understanding of the manifold as given in the forms of space and time. But the termination of categorical cognitions does not leave us with anything but a manifold of conceptions and judgments derived from experience, the possibility of which is constituted by the forms of sensibility plus the categories of the understanding.[14] To reduce this manifold of concepts and judgments of the understanding to the unity necessary for knowledge, and at the same time to give the opportunity for synthesis among concepts—which occurs in reasoning, represented formally by the syllogism—we require a set of principles. For what has been given in the categorical knowledge is always the conditioned, since it is a determined object, i. e., determined by the forms of space and time and by the categories of understanding. Insofar as it is thus determined, it is conditioned, and therefore is not an ultimate in the cognitional order. If we are to synthesize these cognitions of the conditioned it must be in terms of something that is not conditioned, and, consequently, of something that can not be given in experience. If we can not synthesize these categorical cognitions, science is impossible for us. But since we can not find the principle of synthesis in experience—for there we find only the conditioned—the principle must come from beyond experience, still it must come

[13] Cf. Descartes, *Principles*, Pt. I. Princ. 13-14.

[14] Cf. Kant, *op. cit.*, Transcendental Aesthetic, passim.

from some cognitional context. Hence, we must be able to find in the pure reason Ideas that serve to aid the reason in reducing the categorical cognitions to the form of intelligibility in a fashion analogous to that whereby the categories of the understanding reduce the manifold of intuition to intelligibility. Thus Kant concludes that:

> The transcendental concept of reason is, therefore, nothing but the concept of the totality of the conditions of anything given as conditioned. As, therefore, the unconditioned alone renders a totality of conditions possible, and as, conversely, the totality of conditions must always be unconditioned, it follows that a pure concept of reason in general may be explained as a concept of the unconditioned, so far as it contains a basis for the synthesis of the conditioned. . . . It is then the absolute totality in the synthesis of conditions at which the transcendental concept of reason aims, nor does it rest satisfied 'til it has reached that which is unconditioned absolutely and in every respect. Pure reason leaves everything to the understanding, which has primarily to do with the objects of intuition, or rather their synthesis in imagination. It is only the absolute totality in the use of the concepts of the understanding, which reason reserves for itself, while trying to carry the synthetical unity, which is realised in the category to the absolutely unconditioned. We might, therefore, call the latter the unity of the phenomena in reason, the former, which is expressed by the category, the unity in the understanding. Hence reason is only concerned with the use of the understanding, not so far as it contains the basis of possible experience (for the absolute totality of conditions is not a concept that can be used in experience, because no experience is unconditioned), but in order to impart to it a direction towards a certain unity of which the understanding knows nothing, and which is meant to comprehend all acts of the understanding, with regard to any object, into an absolute whole. On this account the objective use of the pure concepts of reason must always be *transcendent*: while that of the pure concepts of the understanding must always be immanent, being by its very nature restricted to possible experience. By idea I understand the necessary concept of reason, to which the senses can supply no corresponding object. The concepts of reason, therefore, of which we have been speaking are *transcendental ideas*. They are concepts of pure reason, so far as they regard all empirical knowledge as determined by an absolute totality of conditions. They are not mere fancies, but supplied to us by the very nature of reason, and referring by necessity to the

whole use of the understanding. They are, lastly, transcendent as overstepping the limits of all experience which can never supply an object adequate to the transcendental idea. If we speak of an idea, we say a great deal with respect to the object (as the object of the pure understanding) but every little with respect to the subject, that is, with respect to its reality under empirical conditions, because an idea, being the concept of a maximum, can never be adequately given *in concreto*. . . . Although we must say that all transcendental concepts of reason are ideas only, they are not therefore to be considered as superfluous and useless. For although we can not by them determine any object, they may nevertheless, even unobserved, supply the understanding with a canon or rule of its extended and consistent use, by which, though no object can be better known than it is according to its concepts, yet the understanding may be better guided onwards in its knowledge. . . .[15]

Now it is possible to reduce all possibilities of conditions to three unconditioned synthetical unities: (1) the unity of the thinking subject, (2) the unity of the series of conditions of phenomena, (3) the unity of all objects of thought in general. And we may designate these three ideas of pure reason as the soul, the world, and God. All phenomena are related to these three absolutes, and therefore in its reduction of the cognitions of the categories to unity the reason will always be operating under the hegemony of these three ideas. Now, do these three ideas that are requisite for the synthesis by the reason of our categorical knowledge, i. e., for our growth in knowledge, have any cognitional content themselves? That is to say, are they properly objects of knowledge, are they constitutive principles of reality, or are they only regulative principles, representing the unobtainable maximum of knowledge. And Kant concludes:

It makes a great difference whether something is represented to our reason as an *object absolutely*, or merely as an *object in the idea*. In the former case my concepts are meant to determine the object, in the latter there is only a schema to which no object, not even a hypothetical one, corresponds directly, but which only serves to represent to ourselves indirectly other objects through their relation to that idea, and according to their systematical

[15] Kant, *op. cit.*, Transcendental Dialectic, pp. 262-267, *passim*.

unity. Thus I say that the concept of a highest intelligence is a mere idea, that is, that its objective reality is not to consist in its referring directly to any object (for in that sense we should not be able to justify its objective validity); but that it is only a schema, arranged according to the conditions of the highest unity of reason, of the concept of a thing in general, serving only to obtain the greatest systematical unity in the empirical use of our reason, by helping us, as it were, to deduce the object of experience from the imagined object of that idea as its ground or cause. Thus we are led to say, for instance, that the things of the world must be considered *as if* they owed their existence to some supreme intelligence; and the idea is thus a heuristic only, not an ostensive concept, showing us not how an object is really constituted, but how we, under the guidance of that concept, should look for the constitution and connection of the objects of experience in general. If, then, it can be shown that the three transcendental ideas (the *psychological, cosmological,* and *theological*), although they can not be used directly to *determine* any object corresponding to them, yet as rules of the empirical use of reason will lead, under the presupposition of such an *object* in the *idea*, to a systematical unity, and to an extension of our empirical knowledge, without ever running counter to this knowledge, it becomes a necessary *maxim* of reason to act in accordance with such ideas. And this is really the transcendental deduction of all ideas of speculative reason, considered not as *constitutive* principles for extending our knowledge to more objects than can be given by experience, but as *regulative* principles for the systematical unity of the manifold of empirical knowledge in general, which knowledge, within its own limits, can thus be better arranged and improved than it would be possible without such ideas, and by the mere use of the principles of the understanding. . . . They should not therefore be admitted as real in themselves, but their reality should only be considered as the reality of a schema of a regulative principle for the systematical unity of all natural knowledge. Hence they are to be admitted as analoga only of real things, and not as real things in themselves. We remove from the object of an idea the conditions which limit the concepts of our understanding, and which alone enable us to have a definite concept of anything; and then we represent to ourselves a something of which we know not in the least what it is by itself, but which, nevertheless, we represent to ourselves in a relation to the whole of phenomena, analogous to that relation which phenomena have among themselves. If therefore we admit such ideal beings, we do not really enlarge our knowledge beyond

the objects of possible experience, but only the empirical unity of those objects, by means of that systematical unity of which the idea furnishes us the schema, and which therefore cannot claim to be a constitutive, but only a regulative principle. For if we admit a something, or a real being, corresponding to the idea, we do not intend thereby to enlarge our knowledge of things by means of transcendental concepts, for such a being is admitted in the idea only, and not by itself, and only in order to express that systematical unity which is to guide the empirical use of our reason, without stating anything as to what is the ground of that unity or the internal nature of such a being on which, as its cause, that unity depends.[16]

We have now seen three exponents of what we have called Idealism. They all agree insofar as they posit the first cognitional experience at a supra-sensible level: Plato and Descartes holding that Nature considered as quantitative, and thus giving rise to Mathematics, is the first proper object that enables the mind to come to be as knowing, while Kant because of his transfer of the principle of cognoscibility to the structure of the mind itself, encounters the first cognitional experience at the level of the understanding, where the mind comes to be by endowing the manifold of intuition with intelligibility, and thus constituting Nature.[17] In other words, all three reach the primary cognitional experience when the mind finds objects which cannot be *per se*, but can be only as the condition or possibility of the mind coming to be. For Plato's and Descartes' mathematical reality do not exist, nor does Kant's Nature exist, except insofar as the mind comes to be with them as the conditions for its own coming to be. In other words, they exist as the pure possibility of the mind coming to be through an act of knowledge, and their essence is to be by the same act of existence as that whereby the mind is in knowing. They all agree also in feeling the need of finding some validation for the mind's existence as such, for at the level of quantity and Nature, they have merely posited the conditions for the mind's first act of existence in point of generation.

[16] Kant, *op. cit.*, Transcendental Dialectic, pp. 538-543, *passim*.
[17] Kant, *op. cit.*, Transcendental Analytic, p. 94.

Consequently, they are forced to go beyond this original level to search for principles to validate the possibilities of the mind's existence in knowing as such. Although Plato and Descartes seem to differ from Kant in that the latter validates the mind's achievement of knowledge in terms of three ultimate principles called by him Ideas, whereas the other two appeal to a formal principle of Good, yet Kant's Ideas, as being merely regulative of the mind and not constitutive of an object, are reducible to the same function in knowledge as Plato's Good and Descartes goodness of God. Plato and Descartes validate the existence of the mind in knowing as such, by a principle of Good rather than by a principle of knowledge. For they assert that we can be sure the mind exists as knowing because all is ruled by a supreme principle of Good that has ordained it is better for a thing to be than not to be, and the being of the mind is achieved through knowing. Kant, on the other hand, has posited as the ultimate validation of the mind's existence what he calls the Ideas of Pure Reason, which are also of a non-cognoscible nature because they can in no way be determined by the mind, but are required by it for reaching its fullness of being in knowing. The Ideas of Self, the World, and God are not capable of being known, but can serve only in a regulative capacity. Yet without this regulation the mind can not come to be as knowing. Hence, here again we find the existence of mind validated by an extra-cognitional principle or principles.

Consequently, we may conclude that it is of the nature of Idealism that it must make two hypotheses: (1) cognitional experience can never occur in regard to a formal principle of such a nature that its being and intelligibility depend upon its being joined with a pure principle of becoming; and (2) the province of knowledge can not be validated in terms of itself, but must always seek ultimate validation in a non-cognoscible principle.

Translating this into Aristotelian terminology, it means that there can be no formal principles whose being and intelligibility depend upon an essential relationship to a material, or be-

coming, principle, for, according to Idealism, the formal principle must be related to the material principle as one contradictory—not contrary—to another. And so we are faced with the fact that since the formal principle is the principle of determination and definition, it can in no way have any attribute that is proper to the material principle. This means that to say a formal principle is of such a nature that it must be the determining principle of a being that can become, is to speak a contradiction. Form, the Idealist argues, or the principle of determination, can not be said to be so, that it can achieve its being and intelligibility only as the determining principle of a being essentially movable, which is the case if we maintain that there are principles of intelligibility or determination whose being consists in their being conjoined with a principle of becoming in the act of existence of a composite being. For, he says, to state this of form is to reduce it from its specificity and make it of the same nature as matter. Hence, for the Idealist the concept of a principle of intelligibility—a form—whose being and intelligibility consist in a relationship to a material principle, is contradictory. For this would mean that the formal principle is only when it is determining the principle of becoming, and together with it is constituting a being whose nature has as a necessary and proper attribute the ability to become, a being which would not be raised from an inferior to a superior status in regard to itself, if freed of a principle of becoming, but a being which would cease to be if it were deprived of the attribute of becoming, of being sensible and movable. For this is what Aristotle means when he says that one branch of speculative science is constituted by beings whose form is of such a nature that it can neither be nor be understood without reference to matter, i. e., the being of natural beings can not be nor be understood without including in their essence and definition a necessary possibility of becoming, a property accruing to them because their specifying principle—their form—is only when determining the principle of becoming, matter.

Hence, the Idealist rules out as a possibility of affording a proper object for a cognitional experience, a qualified body, insofar as it is held that the quality of the body is due to a principle of intelligibility whose being is to qualify a body. For, if that were the case, he says, it would mean that already on the level of sensation we have reached a formal—though intellectually potential—cognitional experience. But at the level of sense, he argues, we find only the individual, the changing, the limited by space and time—all of which are attributes contrary to those demanded by an object of knowledge, which must be eternal, necessary, universal. Moreover, he says, if sensation were knowledge, then knowledge would no longer be a univocal term, for how can what the sense " knows " of the unique and changing be the same generically as that which mind knows of the universal and unchanging. Nature, thus, for Plato and Descartes becomes cognitionally valid when considered under the formality of quantity, for Kant when considered as an orderly whole whose laws are the result of the mind. But for none of the three is Nature a composite of a qualitative principle capable of expressing itself only through a conjoined becoming and quantitative principle. Hence, for the Idealist the formality of Nature ceases to be distinguished internally from the formality of either Mathematics or Metaphysics, for its formality, like that of both of the other two disciplines, can both be and be understood as such only as separated from a principle of becoming, from a material principle.

Thus Nature becomes merely a condition for the mind's coming to be originally; but since Nature, considered as these three men consider it, is not until the mind comes to be in knowing it, and hence both it and the mind come to be simultaneously, they can not find in this object of the mind a criterion to validate the mind's coming to be as knowing simply. For since mathematical objects can not be as such unless their act of existence is given to them by the mind, and since Kant's Nature has no laws except those that come from the under-

standing's knowing, how can we be sure that, as Descartes says, the mind is not under the power of some infinite deceiver who forever deludes us about the existence of the mind as knowing. In other words, until we arrive at an object that does not come to be only when the mind comes to be, we can never find a criterion of verification for the existence of the mind as knowing being proper to the mind.

Thus in each case they must validate the mind's existence by a supreme principle whose primary predicate is not "to be." For the only experience the mind has of the being of an object that is not itself, is in the act of knowledge, where the object known exists by the same act of existence as does the mind. It is true that the object is known as a formal determining principle of something that is non-mind, but the mind can not experience this form as actually determining existence in a non-mind context; it can experience it only as an element existing in its own act of existence. Hence, how can mind be certain that this formal principle has any existence other than as known? So also the case would run in regard to a supreme principle of validation whose primary attribute was "to be." How could the mind be certain that this principle actually had an existence apart from that of being known, that it was not merely an illusory existence concocted by the mind for its own assuagement? Thus the primary validating principle of the mind's existence as knowing must be a principle whose most proper attribute is not "to be," but to order to proper ends. Thus Plato and Descartes have enshrined the Good as the ultimate validation of the mind's existence as knowing; and Kant has supplied us with the three regulative Ideas of Pure Reason, which can never be known, because not knowable, but which map out the topology of the difficult course to be followed by the reason in coming to be empirically. These extra-cognitional Ideas of Kant are not objects of knowledge, but they serve to direct the reason in its operations of knowing, and to assure it of coming to exist with the existence proper to it.

Thus Idealism which began by rejecting the humble, shifting, malleable reality of the sense world, since it could not find in this milieu the necessary conditions for the mind's coming to be as knowing, and which felt the need for a greater certainty in explaining the possibilities of the existence of the mind, completes its critique by appealing to a supra-cognitional principle for validation of the mind's existence. But let us generalize, and ask the question: What is the result of an appeal to an extrinsic principle to validate the being of any order of reality? Insofar as an extrinsic principle is required, the order to which it is related extrinsically, must be related to the principle in some causal fashion. Now causal relation is fourfold, for we can reduce the causes accounting for being to two internal causes, viz., the formal and material (which has as an analog on the metaphysical level, potency), and two external causes, viz., efficient and final. Insofar as we consider the internal causal principles, the formal and material (or potential), they are primarily ordered in their causal activities towards determining how that of which they are the internal causal principles, will exist. This means that their causal priority to that of which they are the internal causal principles is only of an analytic nature, i. e., they are prior not as that which *is* simply, but as principles according to which that which *is* simply, *is*. Therefore, their causal priority occurs in the order of essence which is analytically, but not existentially prior to the existing substance. Hence, when considering composite being, an analysis of the formal and material causes will give us scientific knowledge of why the object of which they are internal causes is as it is, but this knowledge always presupposes the existence of these objects, in terms of which existence the formal and material cause as constituting the essence have significance. But if this existing substance is of such a nature—and as being compound it necessarily will be—that it does not exist *per se*, but has been brought to be, we will not be able to account for its being simply, by a consideration of the material and formal principles of its essence, since

they merely tell us *how* it is, once we have posited the possibility or actuality of it existing.

If we are to account for the possibility or actuality of the existence of the object as such, we must have recourse to one of the two extrinsic causes, either the efficient or final. These do not presuppose the existence of the object as such for their own existence as such, although obviously to be considered as causes in reference to the object, they imply the existence of the object as an effect to account for their existence as causes. Thus the existence of the efficient and final cause, considered apart from their causality aspect, is in no way necessarily of the same formality as that of the effect, although it may be. For there are two ways in which finality of what we call the final cause may operate: (1) as constitutive of the being of that for which it is the final cause; and (2) as regulative, but not constitutive, of the being of something, thus not constituting the good of the being formally and immediately, but only analogically and mediately through the agency of its direction of the thing to its proper status of being.

(1) As Constitutive: when the final cause is the expression of the full achievement or perfection of the existence whose principle is expressed by the formal cause, we then say that the final cause is constitutive of the being of that of which it is the final cause. For in this case the final cause realizes its full and perfect existence in that of the caused being since the final cause in this sense is the perfection of the caused nature. Hence, in this case the final cause presupposes the existence of the caused nature, at least the simple existence of the caused nature which can have no finalities until it is simply. Thus the final cause is the expression of the perfection of existence of a nature which comes to be originally in a state of unachieved perfection. Obviously, then, in this case the final cause must be considered as constitutive of the being of which it is the final cause, for the achieved existence of the being is identical with that of the existence of the final cause. Hence, the final cause whose existence is identical with that of the achieved nature can

not be understood to stand outside of the order of being for which it serves as the finality, thus making the validity and possibility of this finality dependent upon the validity and possibility of the nature achieving itself. In this case, therefore, the order of validity and possibility depends primarily upon the nature whose formality is expressed in the formal cause, for the validity and possibility of the final cause—the achieved nature —is derivative from the formal cause. If we recognize this mode of finality as valid there is no need to seek a principle extrinsic to the nature for the validity of the existence of this finality, for its existence is the achieved existence of the nature, and insofar as this nature is not contradictory its existence is valid.

(2) As Regulative: this mode of finality of the final cause differs from the first mode distinguished by us, in that here the finality is not constitutive of the being of the achieved nature but expresses itself as a finality in assuring the proper coming to be of that which it regulates. In this case, therefore, the achievement of the nature is in no way identical with the existence of the regulative principle which is presupposed as formally and existentially distinct from that which is being regulated. As a regulative principle the formality of its existence must primarily express being proper to being as regulative, and this is what is conveyed by the denomination of being good. Now finality can not be absolutely regulative if it must presuppose that which it is to regulate, for if this is the case it would have to be presupposed that this regulative principle operated within an order of finalities and agents pursuing these finalities which the regulative principle had not brought to be. Hence, it would be a secondary principle of order, causing order to be in the operation of being that had been constituted as such by another principle. If, therefore, the regulative principle of good is distinct from the principle that brings to be agents oriented to, but not yet possessing, their finalities, we can not be certain that the order of operation, ruled by the regulative principle of good, is compatible with the original being of the agents.

Thus we can not limit the designation of good to only the principle regulative of the nature coming to be in an achieved or perfected status, but must extend this designation to that causality which brings the nature to be simply, for thus we can be assured that the principle of order will regulate the entire existential order. In other words, the order of being is valid because the cause of being is the Good, the transcendental principle of order.

It was necessary to carry on this analysis of cause, as considered by the Idealist, so that we may better understand his tenets in regard to the mind. For since the mind is a power of knowing that does not exist of itself some causal account of it must be given to account for its coming to be fully. Insofar as we consider the order of being constituted by knowing, we find that, presupposing the existence of this order of being, we can account for the formality of it by reference to the mind. For since existence is determined must properly by the formal principle, the formality of the act of existence in knowledge must be caused by the nature of the mind. Therefore, since to exist in knowledge is caused by a determination of the mind, the existence of the object in an act of knowledge accrues to it by reason of the fact that it is joined with mind as the formal determining agent of this particular type of existence. That the existence of an object in knowledge is due to the formality of the mind becomes more apparent when we consider that the object known by the mind is, most formally, an existential determinant of something that is non-mind. Hence, the object, though requisite for an act of knowledge, is never identified with the determining principle of the act of existence as it occurs in knowledge for that would be to collapse the determining formality of mind and non-mind into an identity. Thus by a consideration of the mind and the object known we have been able to relate them analogously to the two internal causal principles of material being, the formal and material causes.

Let us now consider the two extrinsic causal principles. If to know were the finality of the mind in the sense of finality

explained in the first meaning of finality as set forth in our prior discussion of the meaning of final cause, the problem of the Idealist would not exist. For in that case when the mind would come to be as knowing, it would come to be in and according to its full and proper formality, and the existence of knowledge would be identical with the existence of the mind as achieved and perfected in its nature. And since, as we said, in this mode of finality there is no need to seek a principle of validation extrinsic to the achieved being, insofar as the mind would be as knowing its existence as such would be valid *in se*. But because the Idealist does not recognize this mode of finality in regard to the mind, but feels that only finality in the second sense distinguished by us is valid when referring to the mind, his peculiar problem arises. He feels that to say knowledge is valid because it is the nature of the mind to know, begs the question. Consequently, if we are to validate the mind's existence as knowing, we must validate it not in terms of knowledge but in terms of order or regulation. Hence, the ultimate principle of validation for the existence of the mind as knowing, for the existence of knowledge, is not the nature of the mind, but rather an extra-cognitional factor of order. Thus the principle validating the being of the mind as knowing is formally and existentially distinct from the order of knowing, for it is a principle of regulation, the good, by reason of which we can validate knowledge as the full existence of the mind, because knowledge is the proper existence of the mind, the good of the mind. Thus knowledge, or the existence of the mind as knowing, becomes valid because it is a mode of the regulatory action whose radical principle is the Good. Hence we see that the final validation of the mind's full achievement of its nature in knowledge is given by the Idealist in terms of a principle of good, of order, rather than of knowledge, for knowledge is valid only as a mode of order or of good.

Having established that the mind's achievement is due to a principle of Good, we must now consider what is the nature of the principle accounting for the coming to be of mind as know-

ing. Obviously, the Idealist does not accept the validity of the mind's being *qua* being, but only *qua* good. Hence, he feels that to deny that the principle of efficiency in the order of mind is a principle of good, is to remove all possibilities of ever validating the mind's existence as knowing. Therefore, considering the existential causal factors in the order of mind, he must posit a principle of good to validate both the coming to be of the mind as knowing, and its achievement of its nature as knowing. Above we have related the mind and the object to each other in the act of knowledge as the formal and material principle, both of which principles, as we saw before in our discussion of the formal and material causes, presuppose the act of existence; they do not bestow, but determine the bestowed act of existence. Therefore, the act of existence received by the mind and object in knowledge will be the result of some factor extrinsic to either of them. But, as we saw above, there is no need for the efficient principle of any order of being to be of the same nature as the being of that order. Thus, if the act of existence in knowing is given by some factor extrinsic to the mind and the object, and related to them as the efficient cause, this cause will be of a non-cognoscible nature, and, therefore, will be of such a nature that no account can be given of it. For if we could give an account of this principle because it has as an attribute cognoscibility and is primarily to be apprehended under that modality, it would return us to the problem of validating the existence of knowledge. Hence, in terms of knowledge this efficient cause of knowledge can not be adequately grasped. Thus the Idealist must have recourse to the transcendental concept of a principle of the Good, and attribute efficient causality in the order of mind to this principle. For if, as the Idealist holds, the order of mind or of knowledge, is ever suspect and ever requires validation, supreme efficient causality operating under supreme knowledge would not *per se* be valid, and hence all existential results of this supreme efficient causality would be questionable. Supreme efficient causality can achieve unquestionable existential results only when operating under the absolute existential attribute of Good, i. e.,

under an attribute that can achieve effects in all orders of existence and not merely in the order of mind, which thus is finally validated because it has been brought to be as an effect of the efficient causality of the principle of the Good. So, for the Idealist the ultimate explanation of the being of the mind in knowing is that it results not from the object nor from the mind, but from the efficient cause of this order of being, as of all orders of being, the Good, which as superseding this order must be called the Unknown Unknowing but causing knowledge.

What in effect has the Idealist done to the order of mind? Our consideration of the causal factors involved in knowledge as the Idealist sees it will answer this question. Formally he has left the order of mind undisturbed, for he recognizes mind as the proper formal cause of knowledge, as the formal determinant of any and all existence in the order of being known. He has likewise recognized the material role played by the object that is known. And so the act of knowledge for him consists in an act in which a knower and known exist simultaneously, thus sharing a single act of existence, but sharing it according to contrary modes. Hence, in the order of essence, in saying what constitutes the act of knowledge, he has worked no change. It is in the order of the existence of knowledge that the Idealist has introduced radical changes. He recognizes the role of mind, as was said above, only as that of a formal cause, attributing to it no existential activity whatsoever; the existence of knowledge, though formally determined by mind, is not existentially caused by mind. If the act of knowledge would be existentially caused by mind it would mean that knowledge would be a final cause of mind in the first sense defined in our discussion of final cause; and being a final cause in this sense it would be *ipso facto* the achievement of the nature of mind, and since the nature of mind does not involve a contradiction, the achievement of its full existence would not be contradictory and would, therefore, be valid. Thus there would be no need of any principle extrinsic to mind to validate its existence as knowing—but this is the original negation that gives rise to the Idealist's problem.

Since, then, the Idealist does not recognize the mind as a power of existence, as a determinant not only of the formality of essence but also of existence, he postulates as existential determinants factors of a supra-cognitional nature, factors not concerned with knowledge but with regulation, with order. Thus the determinants of the existence of knowledge can not be found within the order of knowledge, for this is an order that depends for its validity upon being brought to be and upon being according to a principle of Good. Therefore it is in terms of the Good that the existence of the act of knowledge is validated by the Idealist. For the mind comes to be under the hegemony of an efficient principle of Good and reaches its fullness of being in knowing by reason of the regulative finality of this same principle of Good. Thus the entire order of existence of mind—in its coming to be and in its achievement of its nature—is dependent upon the supra-cognitional principle of the Good. Hence, for all questions of existence in the order of mind we must go outside of this order of mind. And thus mind becomes an attribute proper only to caused beings, for its existence is not valid in itself but only in terms of a principle of efficiency designated as the Good. This reduction of mind, insofar as it is mind, to the order of caused being both in its coming to be and in its achieved existence, removes from it the most proper attribute of a living thing, the power of self-actuation. For, as we have seen, the existential factors of mind for the Idealist necessarily lie outside of mind. Mind, therefore, as necessarily a caused mode of being can not be attributed to that which is uncaused. Hence, the supreme principle of Good cannot be said to be mind, for since mind is necessarily a caused and, therefore, a limited perfection, to attribute such a perfection to the unlimited principle of Good would be to limit its perfection. Moreover, the horizon of mind will necessarily be limited to knowing only other caused beings, for it is contradictory that any being could come to exist in the act of existence proper to knowledge unless it were of such a nature that it could and must have a caused existence. Hence, we can no

longer define the mind as the "form of forms" but only as the form of caused forms; the realm of mind's operation is no longer that which is, but only that which is as caused. Thus the unlimited principle of perfection, the Good, must forever be unknown and unknowable to mind, for that it should be known by mind would require that it should come to be in the necessarily limited way in which mind is. But this is obviously a contradiction. Hence, we must admit that anything we know of the ultimate cause, of the Good, is necessarily fallacious for it is beyond all possibilities of knowledge.

Thus the Idealist has limited mind to the order of caused beings, and beyond this order it can never go. Although mind may ask and answer the why of other caused things, yet when it approaches the one question to which it is ever drawn—the knowledge of the possibility and validity of its own existence—it must destroy itself by an act of faith in a supreme noncognoscible Good. For in having to rely for its knowledge of the uncaused on an act of faith, it *de facto* admits that its most prized possession, the science of being *qua* being, is an impossibility, a contradiction for it. Such a science demands that mind be able to grasp the uncaused as well as the caused. But a mind whose efficiency and finality depend upon causal factors formally distinct, can never achieve such a science. Yet even such a mind must validate its existence, and it does so by an act of faith in a supreme principle of order. This is a perversion of faith for it is a utilization of faith to validate and explain not the super-nature but the nature of something. Hence, such a validation of the mind is really a destruction of the mind. It requires the mind to interpose between itself and an object proper to it, a principle of authority—in the form of the Good—to insure the propriety of what should be a natural relationship. Hence, in every act of knowledge the mind must make this act of faith in the regulatory action of the Good before it can make any statement about its natural object, and this is destruction for the mind. I say destruction because this act of faith does not result in the mind moving on after making it to live in a

supernatural fashion, but rather serves as the condition for the mind to return to its own natural status which, because lacking self-sustaining principles, is one of eternal fear. An act of faith should terminate in an excelling of the natural status, a rest from natural disquietude, but the termination of the Idealist's act of faith brings not rest, but only the possibility of renewed perturbation. This, in short, assures for the mind the Promethean fate, *par excellence*.

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ARISTOTELIAN AND MATHEMATICAL LOGIC

WHAT is the difference between the traditional Aristotelian logic and the newer, so-called mathematical logic?[1] To such a question the mathematical logicians have a ready answer: the older logic is but a part of the new, and a part so small as to be really only a "fragment,"[2] and a fragment so paltry as to be "entirely insignificant."[3] And what then is the value of Aristotelian logic? Really none at all, unless it be of a certain pedagogical value as a means of introducing the student to mathematical logic,[4] or unless it be valued purely for its historical interest as a somewhat extraordinary and very long-enduring cultural monument. As such, it might merit mention, and perhaps even treatment, in a contemporary text-book;[5] but, of course, it should not any longer be taken very seriously.

And what do the Aristotelian logicians say to all this? Naturally, they don't like it; and yet the unfortunate thing is that they have not said much by way of rebuttal. Why not? Is it because in the nature of the case no rebuttal can be given?

[1] This term "mathematical logic" is doubtless none too fortunate, simply because many other names, signifying exactly the same body of material, have gained currency along with the name "mathematical logic." Indeed, this body of material, as Prof. Lewis has remarked (Lewis and Langford, *Symbolic Logic*, New York, 1932, p. 3), "has not yet acquired any single and well-understood name. It is called 'mathematical logic' as often as 'symbolic logic,' and the designations 'exact logic,' 'formal logic,' and logistic are also used. None of these is completely satisfactory; all of them attempt to convey a certain difference of this subject from the logic which comes down to us from Aristotle and was given its traditional form by the medieval scholastics."

[2] Alfred Tarski, *Introduction to Logic*. New York, 1946, p. 19.

[3] *Ibid.*

[4] Eaton in his *General Logic* gives this justification for his treatment of traditional logic.

[5] Quine, W. V., *Short Course in Logic*, Cambridge, 1946, p. 37.

This is what the mathematical logicians all confidently assume, and they seem pretty well to have convinced others of the fact as well. And yet it is still at least a possibility that the reason no rebuttal has been given is because as yet no champions have come forth from the camp of the Aristotelians to give it.

But why have champions not been forthcoming? One reason might be that the presentations of Aristotelian logic that have been given in modern text-books have in no wise done justice to the subject. Thus, stressing formal logic—and even this in a very watered-down fashion—to the almost complete exclusion of material logic, they have quite generally failed to make clear what the nature of logic is, what its significance is, what the peculiar subject matter is with which logic should concern itself. As a result, the mathematical logicians have had little trouble brushing the whole discipline aside as if of no moment, and the Aristotelians for their part have found themselves unhappily embarrased for want of really ready ammunition.[6]

Nevertheless, for all this, the Aristotelian tradition is quite capable of presenting a remarkably clear and unambiguous account of the scope and nature of logic. Moreover, once this account is honestly considered and is set over against the not-so-clear and rather ambiguous account of the general character of logic that is given in mathematical logic, it may become apparent that the one discipline certainly is not subsumable under the other as a mere insignificant part of the whole. On the contrary, the very nature and purpose of logic as conceived by the one discipline may turn out to be so radically different from what it is as conceived by the other, that to call both of

[6] These strictures may seem extreme, and the author recognizes that he speaks subject to correction. And yet he ventures to suggest that no really full-fledged treatment of Aristotelian logic has been brought out since John of St. Thomas. Indeed, of the more modern discussions the two that would really seem to be of superior merit are, each in its own way, seriously inadequate. Thus Maritain has so far only brought out a Formal Logic. And as for Gredt, his treatment is highly condensed and at the same time makes no effort to take cognizance of the modern challenge to Aristotelian logic that has come from the mathematical logicians. Regarding the other professedly Aristotelian treatises—Joseph, Joyce, *et al.*—, it would be an interesting study to determine how far and in what ways they have consciously or unconsciously departed from the main Aristotelian tradition.

them "logic" would be simply to render the word hopelessly equivocal. Besides, a comparative view of the two contrasting accounts of logic may actually reveal some serious and yet hitherto unsuspected confusions and deficiences, particularly in mathematical logic.

Accordingly, let us proceed at once to a summary statement and description of what logic is according to these two traditions. This done, we can then go on to single out certain specific topics as a basis for more detailed comparison and contrast.

First, then, as to Aristotelian logic. This is what might be called a radically "intentional" or realistic logic. But just what does this mean? In answer we might say that the Aristotelian logician recognizes at the outset a thoroughly realistic first principle, viz., that things can be and are known by human beings and that they can be known as they are really and in themselves. Nevertheless, in order that such real things be known, they must be brought before the mind as objects; in other words, we must tend toward them intellectually, or "intend" them, as the technical word has it.

Thus, for example, no matter what it is that we are seeking to understand or know, whether it be manganese or parallelograms or rainfall in the tropics, we cannot possibly gain any knowledge or understanding of these things without getting some sort of ideas or concepts of them, or without formulating propositions about them, or perhaps too without giving evidence for the propositions in the form of arguments. In short, the manganese or the parallelogram or the rainfall, which are perfectly capable of real existence *in rerum natura*, must nevertheless, in order to be known, be brought before the mind in concepts and in propositions and in arguments. And, in turn, these concepts and propositions and arguments by their very natures signify or mean or intend the things they are about. For what is it to be a concept but to be a concept of something, or a proposition but to be about something, or an argument but to be in proof or demonstration of something?

In other words, these concepts and propositions and arguments are said to be simply meanings or "intentions." [7]

But just where does logic fit into this picture? Well, clearly from what we have just said, the tools and instruments of all science must be in the nature of intentions like concepts, propositions, and arguments. These, in other words, are what we must use in order to signify or intend the real things of the world which we are seeking to know. But, suppose now we should seek to know and understand these very concepts, propositions, and arguments by which we know reality. We should then be seeking to know not the real order of nature, but rather the tools or instruments by which we come to know this real order. We should be using concepts, propositions, and arguments in order to understand the functions of concepts, propositions, and arguments. Or if we designate these things by the technical term of intentions, we may say that we are employing intentions in order to understand how intentions intend reality. And this is logic.

Moreover, since our intentions of reality come first, and afterwards our intentions of these intentions—that is to say, since we first understand things and only later understand how we understand things—since, in other words, there is an order of prior and posterior in our intentions, it is said that in all sciences other than logic what are involved are so-called *first intentions* of the mind, whereas in logic what are involved are *second intentions.*

Besides, just as the peculiar subject matter of logic may be understood in terms of the different orders of intellectual intention of which our minds are capable, so also this same peculiar subject matter can be understood in terms of the two different states under which the objects of our intentions are capable of existing. Thus for example, consider a possible object of knowledge such as the chemical element silver. As actually existing or as capable of existing *in rerum natura,* silver has its own real nature and properties. It is an element; it has an

[7] This word will be used hereafter in this technical sense.

atomic weight of 107.880; it melts at 960.5° C, etc. And yet note that this very same thing we call silver is also capable of existing under a quite different state or condition. For when we say "silver is an element," silver is the subject of a proposition. Likewise silver can also function as a universal, predicable of many particulars, or as a species of a genus, or as a middle term in a syllogism. And yet all of these last are certainly not among the *real* properties of silver. No chemist ever discovered these to be in silver as it exists *in rerum natura.*

Accordingly, it is necessary to recognize that the nature or essence of anything, whether of silver or of the number 2 or of the color green or what-not, is capable of existing under two different states or conditions, viz., as a thing *in rerum natura* or as an object of knowledge or intention held before the mind. Moreover, in so far as any such nature or essence is brought before the mind and comes to exist as an object of human knowledge or intention, to that same extent it takes on those peculiar logical or objective [8] or conceptual characteristics which we have noted, viz., such things as predicability, extension and comprehension, being a middle term, being a species, etc.

Thus logic, involving as it does intellectual acts of second intention rather than first intention, is concerned to know the natures of things, not as they are in themselves or in reality, but precisely as they are as objects of knowledge, i. e., as subjects or predicates or universals or genera etc. In other words, once again, we see how logic is concerned with knowing, not real things, but rather the intention by which real things are known.

This suggests still another way of characterizing the subject

[8] As is well known, the meaning of this word has undergone a curious transformation. In current usage it is ordinarily contrasted with "subjective" and means that which pertains to things as they are in themselves and independently of the mind. However, in its original and literal sense the word "objective" means almost the opposite: it means that which pertains to things precisely in so far as they are *objects before the mind.* It is in this latter sense only that we shall use the term in this paper.

matter of logic and contrasting it with that of other sciences. For the intentions of things are not real in the same way in which the things themselves are real. Or, to put the same point in another way, things *qua* known or *qua* objects of intention are not real in the same sense as they are *qua* existing *in rerum natura*. Thus the metal, gold, for instance, as an object before the mind, i. e., as subject or predicate or middle term, is not real in the sense in which the actually existing gold is real. Or again, the universal concept of gold or a proposition about gold are not real in the same way in which the gold itself is real. Similarly, an inductive argument demonstrating the solubility of gold in *aqua regia* is hardly real in the same sense in which that property of solubility itself may be said to be a real property of gold. For these reasons, therefore, it is customary to say that logic, unlike all other sciences, is concerned not with *real beings* (*ens*), but rather with *beings of reason* (*ens rationis*).

So much, then, for our account of the Aristotelian view of logic as being at once intentional and realistic—intentional, because it is concerned with the intellectual intentions or formal signs of things; and realistic, because even though the intentions themselves are mere beings of reason, they are nevertheless intentions of real beings, i. e., the means or intruments of knowing the real. But now what of mathematical logic? From the point of view of this tradition, what in general is logic considered to be and to be about? Unhappily, the answer to this question, as developed by the mathematical logicians, would not seem to be either very clear or very thoroughly worked out or even generally agreed upon. Thus Prof. Lewis flatly asserts that the subject matter of logic is " the principles which govern the validity of inference." [9] On the other hand, Prof. Quine suggests that characterizations of the subject matter of logic such as " ' the science of necessary inference,' ' the science of forms,' etc. are scarcely informative enough to be taken as answers." [10] And, as for Cohen and Nagel, they

[9] Cf. *op. cit.*, Lewis and Langford, p. 3.

[10] Quine, W. V., *Mathematical Logic*, Cambridge 1947, p. 1. It is interesting to

seem to suggest that the consideration of inference really pertains more to psychology than to logic.[11]

As a matter of fact, the more one reads contemporary treatises on mathematical logic,[12] the more one gets the impression that these logicians are not so much interested in careful definition of their subject matter, as they are in a detailed exposition of that subject matter, without bothering to state exactly what sort of thing it is that is being dealt with.

Thus Prof. Quine, after noting that it has been customary to describe logic, vaguely, as the science of necessary inference, immediately pushes on to what he calls " a somewhat less vague characterization of the field." " Certain basic locutions," he says, " to begin with, including ' if,' ' then,' 'and,' ' or,' ' not,' ' unless,' ' some,' ' all,' ' every,' ' any,' ' it,' etc. may be called *logical*. They appear in statements on any and every subject. The pattern according to which the other more special ingredients of a statement are knit together by these basic locutions may be called the *logical structure* of the statement." [13]

This much done, the reader is then rather astonished to find that that is just about all that is done in the way of what Prof. Quine himself calls " a characterization of the field." [14] Indeed, all the rest of the book is concerned simply with the exhibiting of these " basic logical locutions " and of the " logical structures " that can be fashioned out of them. But as to precisely what kinds of *things* these locutions and structures *are*, nothing more is said.

note that in his *Elementary Logic* (Boston, 1941), Prof. Quine (p. 1) seems to accept this characterization of logic as " the science of necessary inference "; but he still protests that this is " vague."

[11] Cohen, M. R., and Nagel, E., " An Introduction to Logic and Scientific Method," New York 1934, pp. 7 and 18-19.

[12] The present writer by no means pretends to have covered the extensive literature in this field. He hopes, though, that in what follows he has not been guilty of any serious misrepresentation of the nature of mathematical logic.

[13] *Elementary Logic*, p. 1.

[14] It perhaps should be noted that in his *Mathematical Logic* Prof. Quine does go into more detail in respect to this " characterization of the field." Still, the detail is not such as to warrant any revision of our general conclusions.

Likewise, with Prof. Tarski's book, the pattern would seem to be the same. Indeed, so far from stating what logic is, the book opens with a discussion of the use of variables. And then in the next chapter, turning to constants, Prof. Tarski suggests that these are of two kinds. On the one hand, there are those that are " specific for a given theory." And " on the other hand, there are terms of a much more general character " occuring in most of the statements of arithmetic, terms which are met constantly both in considerations of everyday life and in every possible field of science, and which represent an indispensable means for conveying human thoughts and for carrying out inferences in any field whatsoever; such words as '*not*,' '*and*,' '*or*,' '*is*,' '*every*,' '*some*' and many others belong here. There is a special discipline, namely *Logic*, considered the basis for all the other sciences, whose concern it is to establish the precise meaning of such terms and to lay down the most general laws in which these terms are involved." [15]

Now illuminating as this statement is, it is unfortunately just about all that there is. There is no sort of suggestion as to what kind of beings these " not's " and " and's " and " is's " and " every's " are. Are they beings of reason or are they real beings? Do they represent mere intentions by which things are known, or is their intentional or significatory character wholly irrelevant to their investigation by logic? Are they in any way to be regarded as instrumental to science and knowledge, and if so, how? Unhappily, these and all questions like them are almost completely ignored by the mathematical logicians. As a result, when compared with the Aristotelian tradition, the word of the mathematical logicians would seem to betray a decided philosophical naïveté. But perhaps this is a virtue rather than a vice. After all, if a painstaking philosophical regard for the precise nature of the entities investigated in logic is either fruitless or dispensable, then the sooner logic is quit of it the better.

Nevertheless, it will be the thesis of this paper that it is

[15] Tarski, A., *An Introduction to Logic* (2nd edition, New York, 1946), p. 18.

precisely this philosophical indifference or naïveté on the part of the mathematical logicians that has been responsible for numberless confusions, inadequacies, and even inconsistencies in their accounts of logic. Thus they have seriously confused the real with the ideal and the ideal with the real. They have failed to recognize the peculiar character of proof or demonstration as a means of making evident that which is either unknown or unclear. Moreover, even after seriously misconstruing the nature of inference or proof, they have then turned around and either surreptitiously or unconsciously introduced into their own treatments of the subject the very notions of inference and proof which they had formerly most blatantly discarded.

However, these are charges which can not just be asserted; they must be substantiated. To this end, we propose in this paper to examine the special topic of propositions. And more specifically, we want to examine the ways in which propositions may be combined and compounded together. Our method will be first to present the account of propositional composition as it has been given by the mathematical logicians, then to develop the Aristotelian account of the same topic, and finally to make a critical comparison between the two accounts with a view to seeing whether our thesis is in fact substantiated or not.

I. Propositional Composition According to the Tradition of Mathematical Logic

Now, so far as propositional combination is concerned, there would seem to be in the tradition of mathematical logic quite general agreement that there are three fundamental ways in which two or more propositions may be compounded together to give a single, compound proposition. Those ways are conjunction, disjunction, and implication. Moreover, in addition there is the notion of negation. To be sure, this latter does not involve a combination of two or more propositions in order to form a single one, and yet it does, in Quine's words, constitute

" a method merely of elaborating a single statement to form a new statement." [16]

Further these modes of propositional elaboration and composition may be conveniently symbolized thus:

$\sim p$—negation
$p \supset q$—implication
$p \cdot q$—conjunction
$p \vee q$—disjunction

Accordingly, considering these as the basic types of propositional composition, and employing some such symbolism to represent them, it is possible to develop a whole propositional calculus, in which all the many and varied ramifications of such propositional composition may be traced out and demonstrated.[17] Thus, for instance, the calculus may be seen to yield such typical theorems as these:

$p \supset \sim q \cdot \supset \cdot q \supset \sim p$
$q \supset r \cdot \supset : p \supset q \cdot \supset \cdot p \supset r$
$p \cdot \supset \cdot q \supset r : \supset : q \cdot \supset \cdot p \supset r$
$p \cdot \vee \cdot q \vee r : \supset : p \vee q \cdot \vee \cdot r$
$p \cdot q : \supset : q \cdot p$

Nevertheless, our concern here is not with the detailed exfoliation of theorems, but rather with the interpretation and understanding of the calculus as a whole. And to this end, it will be well to take note of three points concerning the general nature of such a calculus which, most mathematical logicians would seem to be agreed, are fundamental to a proper comprehension of it.

Thus in the first place, it is pointed out that the theorems of the calculus, like any mathematical theorems, are made up of constants and variables. As for the constants, these are

[16] *Mathematical Logic*, p. 13. Quine actually classifies negation or denial as a mode of " statement composition," denominating it as " singulary " in character, in contrast to such other modes of composition as are " binary," " tertiary," etc.

[17] The actual process of development, of course, may be either according to the matrix method or according to the logistic method.

simply the basic notions of conjunction, negation, implication, etc. which it is the business of the calculus to explain the meaning and trace out the ramifications of. On the other hand, the variables, i. e. the p's, the q's, the r's, etc. in the various theorems, stand for any propositions indifferently. That is to say, given a theorem in the calculus, one could substitute any proposition whatever for any of the p's or q's, etc., appearing in the theorem. In short, just as in the algebraic formula $x + y = y + x$, the x and the y stand for any numbers whatever, so also in the formula $p \supset q \cdot \supset \cdot \sim q \supset \sim p$, p and q stand for any propositions.[18]

And now for the second point, in regard to the calculus. We find it frequently said that any and all the theorems appearing in the calculus are what may be called tautologies. What this means is that such theorems are necessarily true and always true.[19] And to say that they are necessarily true and always true means that no matter what propositions be substituted for the variables p, q, etc., and no matter whether the propositions that are substituted be true or false, the proposition as a whole, i. e. the theorem, will still be true.

Nor is it difficult to see how these theorems in actual fact do have this tautologous character. Thus consider a simple theorem such as this:

$$p \supset q \cdot \supset : \sim q \supset \sim p.$$

Clearly, if p does imply q, then it does not make any difference what propositions p and q stand for, the denial of q will necessarily entail the denial of p. For instance, it would make no difference what sort of conditional proposition we were considering—whether it were " If two things are equal to the same thing, they are equal to each other," or " If Hamlet was afraid of murder, his will was weak "—in either case, to say that two given quantities were not equal to each other would imply

[18] For a most lucid account of this first point, cf. Tarski, *op. cit.*, pp. 3-14, 18-19, 37-38.

[19] This term " tautology " has been subject to many different interpretations. However, we are following Quine's usage here, cf. his *Mathematical Logic*, p. 55.

that they were not equal to the same thing, or to deny that Hamlet was weak of will would imply that he was not afraid of murder. And likewise, it would make no difference whether p was true or false or whether q was, or even whether p actually did imply q or not, it would still be true that *if* p did imply q, then the denial of q would imply the denial of p.

And now we come to the third general point in connection with the interpretation of the calculus, which would seem to deserve mention here. That point is that all propositional compounds in the calculus (including negation, of course) are to be understood as being *truth-functional* in character.[20] What does this mean? In answer, we may note first that any proposition is said to have a certain *truth-value*, its truth-value being determined by whether the proposition be true or false.[21] Accordingly, any compound proposition (i. e. a proposition compounded out of other propositions as its ingredients) may be " said to be *truth-functional* if the truth value of the compound is determined by the truth values of the components." [22] Thus, for instance, consider the conjunction of two propositions so as to form one single compound proposition: " Jones is ill and Smith is away." [23] What determines whether this whole compound proposition is true or false? The answer is that this is determined by whether the components are true. For if it be true that Jones is ill and also true that Smith is away, then certainly the conjunction as a whole is true. On the other hand, if either or both of these propositions be false, then one cannot truthfully say " Jones is ill and Smith is away."

Likewise, the negation of a proposition may be regarded as truth-functional. Thus if we ask what determines the truth or falsity of $\sim$ p, the only possible answer would be the truth

[20] As is well known, Professor C. I. Lewis (cf. Lewis and Langford *op. cit.*) is notable in the exception which he takes to his fellow mathematical logicians for their insistence that all propositional composition, including implication, can be adequately dealt with from the truth-functional standpoint. However, the discussion of Prof. Lewis's views must be reserved for a subsequent paper.

[21] Cf. Quine, *Elementary Logic*, p. 5.

[22] Quine, *Mathematical Logic*, p. 11.

[23] This illustration is Prof. Quine's; cf. *Elementary Logic*, p. 7.

or falsity of p; for if p were false, then by that very fact $\sim$p would be true, and if p were true, then $\sim$ p would false.

And yet, however plausible may be the insistence upon the truth-functional character of conjunction and negation, it is nothing like so plausible when we come to implication and disjunction. And yet most of the mathematical logicians are just as insistent that these types of propositional compound too are to be treated truth-functionally. Thus Prof. Tarski describes implication, for example, in the following way: "By asserting an implication one asserts that it does not occur that the antecedent is true and the consequent false. An implication is thus true in any one of the following three cases: (1) both antecedent and consequent are true, (2) the antecedent is false and the consequent is true, (3) both antecedent and consequent are false: and only in the fourth possible case, when the antecedent is true and the consequent false, the whole implication is false." [24]

Now from such an account we should begin to see what is the thrust of this so-called truth-functional interpretation of propositions. For it means that so far as compound propositions are concerned, it makes no difference what the component propositions say or what they mean or what they are about; [25] all that matters for the determination of the truth or falsity of the compound is whether or not these components be true or false.

For instance, suppose we consider the proposition "If $2+2=4$, then New York is a large city." Commonsensically, this might seem to be an absurd proposition, but from the point of view of the truth-functional interpretation of propositions, it is a perfectly legitimate proposition and is true. Thus, referring back to Prof. Tarski's account of conditional propositions which

[24] Tarski, *op. cit.*, p. 23. For a like treatment of disjunction, cf. *ibid.* pp. 22-23.

[25] Cf. Tarski's remark respecting disjunction (op. cit., p. 23): "The creators of contemporary logic . . . decided to consider the disjunction of any two sentences as a meaningful whole, even should no connection between their contents or forms exist; and they also decided to make the truth of a disjunction—like that of a negation or conjunction—dependent only upon the truth of its members."

we cited above, we find that any implication is true if both its antecedent and its consequent are true. Now it is true that $2 + 2 = 4$, and it is also true that New York is a large city. Hence, accordingly it must follow that the whole compound is true, i. e. that the one proposition implies the other.

Or again, even if we had said " If $2 + 2 = 5$, then New York is a large city," that too would have been a true proposition. For according to Prof. Tarski's characterization it suffices for the truth of a conditional proposition that its antecedent be false and its consequent true. Indeed, on the truth-functional interpretation of propositions, any true proposition, no matter what it is, may be said to imply any other true proposition, and any false proposition may be regarded as implying any proposition, no matter what it is, and regardless of whether it be true or false. In other words, the truth or falsity of compound propositions is in no wise tied up with what those propositions mean or say, but rather is wholly dependent upon whether the component propositions be true or false.

Now on the face of it, this is an admittedly strange and implausible account of the nature of propositional composition.[26] Why, then, are mathematical logicians so determined to stand by it? Perhaps if we follow Prof. Tarski's explanation closely, we can gain some inkling of the reason. Thus he points out how " in common language, two sentences are joined by the word ' or ' only when they are in some way connected in form or content. The nature of this connection is not quite clear." [27]

[26] Even the mathematical logicians themselves recognize as much. Thus Prof. Tarski is quite frank to say that this interpretation of implication and disjunction is altogether at variance with common sense usage and with common sense understanding of such propositional combination. Still he justifies it on the ground of its greater simplicity and clarity. (Cf. *op. cit.*, Ch. II, §§ 7-8.)

As for Prof. Quine, he says not only that the truth-functional interpretation of conditional propositions is contrary to usage, but that in the case of subjunctive conditionals, these simply are not truth-functional. Likewise, statement connectives such as " because " are not truth-functional. Nevertheless Quine feels that in each such case " the purposes served by the given non-truth functional statement compound could have been served just as well by means of truth-functional statement compounds plus further devices " etc. In other words, Quine hopes that all non-truth-functional compounds can be simply eliminated. Cf. *Elementary Logic*, § 7-9.

[27] *Op. cit.*, p. 22.

And the reason it is not clear is because it depends, so Prof. Tarski seems to think, on "psychological factors," especially on "the presence or absence of knowledge."[28] As for these psychological factors, they would seem to be of this character: "In ordinary language, we tend to join two sentences by the words '*if . . . then*' only when there is some connection between their forms and contents. This connection is hard to characterize in a general way, and only sometimes its nature is relatively clear. We often associate with this connection the conviction that the consequent follows necessarily from the antecedent, that is to say, that if we assume the antecedent to be true we are compelled to assume the consequent too to be true (and that possibly we can even deduce the consequent from the antecedent on the basis of some general laws which we might not always be able to quote explicitly). Here again, an additional psychological factor manifests itself. . . ."[29]

This is unfortunately pretty vague. In fact, one is tempted to suspect that common sense itself is nothing like so vague about these so-called "psychological factors" as Prof. Tarski himself is. But, be that as it may, we venture to suggest that what Prof. Tarski is really trying to get rid of, when he wants to banish these "psychological factors" from logic, is nothing other than what the Aristotelian logician would call "intentions." In other words, he wants to treat of propositions in such a way that it will not be necessary to consider their meaning or significance. And, by thus abstracting from the intentional character of the propositions with which it deals, logic can presumably gain both in clarity and simplicity.

Nevertheless, since this elimination of all intentions from the logic of propositions marks a really radical departure from the Aristotelian tradition, it might be well for us to scrutinize it still farther and make clear to ourselves just how this elimination of meaning is effected and at what level, so to speak. For in one sense, an Aristotelian logician would be perfectly willing to recognize that the special concrete content of propositions

[28] *Ibid.*, p. 23. [29] *Ibid.*, p. 24.

must sometimes be abstracted from for purposes of a scientific treatment of propositions in general and their possible modes of combination. As a matter of fact, save for certain restrictions that we need not take account of just now,[30] an Aristotelian might well accede to the first two of the three points which we made in characterizing the propositional calculus of the mathematical logicians. Thus for one thing, we remarked on how a propositional calculus treats of propositions in general, and not of propositions of any certain specific kind or meaning. This explains, of course, the use of variables in the theorems. Likewise, we remarked on how the theorems of the calculus were supposed to be true independently of what the component propositions might mean, and regardless of whether they were true or false.

With this much the Aristotelians might go along. And yet the point is that even though both of these things might be true of the theorems in the calculus, that still does not mean that the types of propositional composition which the theorems treat of are themselves in no wise determined by the meanings of the propositions that are thus combined. Thus in order to know that *if* p implies q, then $\sim$ q implies $\sim$ p, we do not have to know what proposition ' p ' says or what ' q ' says. And yet in order to know that a given proposition ' p ' does imply another, 'q,' we do have to know what ' p ' and ' q ' say. In other words, the implication of one proposition by another would seem to be entirely dependent upon the meanings of the propositions concerned.

Or we might put it this way. *Assuming* that some one proposition implies or is implied by another, we do not have to know anything about the content of these respective propositions in order to know certain further properties that attach to such a relation of implication in general. On the other hand, in order to know in the first place that some one proposition does imply or is implied by another, we certainly should have to know something about the content of these two propositions.[31]

[30] These reservations we intend to take account of in a subsequent paper.

[31] These same remarks would apply, of course, *mutatis mutandis*, to disjunction.

But, now on the truth-functional interpretation of propositions, this latter requisite is simply ruled out. For in order to know that any given proposition implies another, it is not necessary to know what these propositions are about—i. e. what their content is or what they mean; instead, it suffices to know merely their truth value—i. e. whether they are true or false. As a consequence, there arise those patent absurdities, on this interpretation of the propositional calculus, according to which any true proposition is implied by any and every proposition whatever, or every true proposition implies every other true proposition, etc.

Thus by way of illustration, let us take our old example of $p \supset q \cdot \supset \cdot \sim q \supset \sim p$. Clearly, for this to be true, it doesn't make any difference what proposition ' p ' stands for or what ' q ' stands for. And yet, even though in such a formula we do abstract from the specific meanings of ' p ' and of ' q,' we nonethe-less recognize that there must be something in the meaning of such propositions that provides the foundation for the relation of implication between them. Consequently, in the propositional function, $p \supset q$, we do not mean just any proposition ' p,' but rather any proposition *whose meaning is such that it implies another proposition.* Similarly, ' q ' does not stand for any proposition, but rather any proposition of such a nature as to be implied by another.

But now on the truth-functional interpretation of propositions, even this restriction in terms of what the propositions mean or say is removed; and instead, abstracting entirely from the meaning or intention of the propositions, the only thing that the calculus is supposed to be concerned with in the p's and the q's is their truth or falsity.

Of course, it might be a question as to whether a consideration of propositions in utter disregard of their intentional character is any longer a consideration of propositions at all. However, all such questions of appraisal and criticism we must reserve for our final section. For the present, we must turn our attention to the account of propositional composition which is given in the Aristotelian tradition.

II. Propositional Combination According to the Aristotelian Tradition

Now as is well known, in the Aristotelian [32] tradition the basic division of propositions is into categorical propositions, on the one hand, and hypothetical propositions on the other. And according to the usual mode of treatment, the categoricals are to the hypotheticals as the simple to the complex. Thus a catagorical proposition is one having the simple subject-predicate structure, whereas a hypothetical proposition involves a combination of two or more such subject-predicate propositions into a single compound proposition, the mode of composition being either that of conjoining the categoricals, or that of disjoining them, or that of making one such categorical conditional upon the other.[33] In other words, whereas in the categorical proposition the elements that are combined to make up the whole proposition are *terms*, in the hypothetical proposition the elements are themselves propositions. And thus it is that the copula in a hypothetical proposition is said to be some such conjunction as " and," " or," " if—then," etc., rather than some form of the verb " to be," as with categoricals.

Still, this is not the whole story. For, not only are categoricals distinguished from hypotheticals as the simple is distingished from the complex; in addition, the hypothetical proposition must be regarded as being literally hypothetical in character, whereas the categorical is not. Now what does this mean?

In explanation, it might be remarked, first of all and just in passing, that it pertains to the nature of any proposition to be assertable and to be susceptible of truth or falsity. Indeed it is in this respect that a proposition differs from a mere term or

[32] The authorities upon which the discussions of the present section are based are John of St. Thomas, Gredt, and Maritain. However, the author will not plague the reader with numerous citations in support of individual assertions. Instead, notice will be taken only of those items in which the author's exposition differs from the standard ones.

[33] Of course, even hypothetical propositions might themselves in turn become the elements of still further conditionals, disjunctions, and conjunctions.

concept. For no term is ever asserted; nor can it be said to be either true or false.

Accordingly, passing to hypothetical propositions of either the conditional or the disjunctive types, we may well ask what it is that is asserted in such propositions. For instance, suppose one were to declare, " Scientists are not truly scientists, if they have not a firm grasp of logic." In asserting such a proposition does one assert categorically either that some scientists are not truly scientists, or that some scientists do not have a firm grasp of logic? Clearly not. Indeed, it might well be that all scientists had a firm grasp of logic, and that all of them were truly scientists; or again, the opposite might be true—in either case, the proposition as a whole could still be true. In fact, the truth of a conditional proposition in no wise entails the truth of either of the component propositions of which it is made up.

Or to take another example, suppose a gangster were to assert " Either we've got to rub him out, or we must frame him." Clearly in making such a declaration, he is not asserting that it actually is going to be necessary to " rub the fellow out." Nor is he asserting that it will be necessary to " frame him." Instead, all he is saying is that *if* not the one, then the other.

Indeed, the point about all such hypothetical propositions would seem to be that the component propositions are never asserted categorically, but only hypothetically; likewise, such components are never considered as being more than merely hypothetically true. Hence the name " hypothetical proposition." On the other hand, what is asserted unconditionally in such hypothetical propositions—and there is an unconditional assertation in all hypotheticals [34]—is the *connection* between the two component propositions, that is to say, the sequence [35] of the one upon the other, or the *dependence* of the one on the other.

[34] Joseph (*Introduction to Logic*, p. 183) makes this point very effectively. Unfortunately, however in almost all other respects he would seem to have thoroughly misconstrued the true nature of conditional propositions.

[35] This is Maritain's term. Cf. his *Introduction to Logic*, p. 104.

Thus, even though it be not asserted that the gangster's victim is actually going to be " rubbed out," still it is asserted that such *will* be his fate, *if* he is not framed. In other words, what is asserted as being true in such a proposition is that there is some sort of *connection* between the victim's being " rubbed out " and his being " framed "; the one is held to be somehow *consequent* upon the other.

Accordingly, if there be no such sequence or connection as is asserted, then the proposition will be false. Thus, for example, a proposition like the one we considered earlier, " If $2 + 2 = 4$, then New York is a large city "—such a proposition would have to be false, on the present analysis, simply because there is admittedly no connection or sequence between the two component propositions. Clearly, then, this way of looking at propositional compounds is markedly different from the truth-functional mode of interpretation.

But then the next question that presents itself is this: granted that certain compound propositions are thus hypothetical in the sense explained, is it also the case that every compound proposition is necessarily hypothetical, and that as a consequence being compound and being hypothetical are really the same thing? The answer that would ordinarily be given in the Aristotelian tradition would doubtless be " Yes." And yet for purposes of exposition and in order to point up certain contrasts with mathematical logic, we propose to answer " No."

As a matter of fact, the exposition which we have already given of the distinction between categorical and hypothetical propositions would certainly seem to suggest that more is involved here than the mere distinction between simple and compound. Moreover, an obvious example of propositions which are certainly compound, and which yet would not seem to be hypothetical in the sense defined, would be ordinary conjunctive propositions. Thus " Jones is ill and Smith is away "—clearly in this case the assertion of the conjunction as being true does entail both the assertion that Jones is ill also the assertion that Smith is away. Hence such a conjunction would scarcely seem to be hypothetical in character.

But there are even more interesting examples of this than conjunction. Thus consider propositions containing such copulas as " since," " because," " consequently," " therefore," or likewise propositions with copulas like " although," " still," " nevertheless." The former we may term *causal* propositions,[36] the latter *concessive* propositions. Clearly, both of these types of propositions are compound, and yet for all that they are not hypothetical.

For example, suppose one were to declare " Although I can accomplish nothing, I am resolved to fight on." Here again the assertion of the compound does entail the categorical and unconditional assertion of each of the components. Or again, if a causal proposition be true—e. g. " Since I can accomplish nothing, I am resolved not to fight on," then it is true that the person can accomplish nothing and also true that he is resolved not to fight on. On the other hand, were this proposition expressed in conditional form—" If I can accomplish nothing, I am resolved not to fight on "—or in disjunctive form—" Either I must be able to accomplish something, or I am resolved not to fight on "—the truth of the whole compound would not entail the truth of the components. On the contrary, the components would be true only hypothetically but not categorically.

Consequently, we would seem to be forced by the evidence to recognize that besides hypotheticals, there are other types of compound propositions, notably conjunctive propositions, concessive propositions, etc. Moreover, if the one type of propo-

[36] This marks an even more striking departure from the tradition than our earlier suggestion that conjunctions should not be classified as hypotheticals. As a matter of fact, to those versed in the Aristotelian tradition, it is well known that so-called causal propositions are not single compound propositions at all, but rather syllogisms.

Nevertheless, it should be apparent from the sequel that our present handling of causal propositions differs not in principle, but only in mode of presentation, from the tradition. Moreover, the justification for such a different mode of presentation is that the mathematical logicians (e. g., Quine) consider that causal propositions are regular propositional compounds. Hence by granting them this much, we shall be able the more easily to expose the inadequacies of their further treatment of these compounds.

sitional compound, viz., conditionals and disjunctives, be called *hypothetical compounds*, we might properly classify the other varieties under the heading of *categorical compounds*.

Nevertheless, this division into hypothetical compounds and categorical compounds is not the only way in which compound propositions may be classified, if we are to do justice to all of the Aristotelian insights into the nature of such compounds. For there would also seem to be a division of compound propositions into what we might call *conjunctive compounds* and *implicative compounds*.

Indeed, this latter classification is one that cuts right across the previous division of compound propositions into hypothetical and categorical compounds. And in order to understand what is meant by this new division into implications and conjunctions, we might call to mind what was suggested earlier in regard to hypothetical propositions. For we pointed out that invariably in such conditional and disjunctive compounds there is a relation of sequence or dependence between the components within the compound. Thus, consider one of our earlier examples, " If Hamlet was afraid of murder, his will was weak." Here obviously, any recognition on our part of a weakness of will in Hamlet is asserted to be dependent or consequent upon a recognition of his fear of murder. For this reason, the whole proposition may quite justifiably be called an implicative compound, the one element in the compound being in a relation of implication with respect to the other.[37]

On the other hand, in a conjunctive compound there is literally nothing more than a mere conjunction of the components; and any sort of implication of the one by the other is simply absent. For instance, " Jones is ill and Smith is away." Here neither proposition is dependent upon the other: neither follows from the other; neither is implied by the other. Instead, both are asserted to be simultaneously true merely as a matter of fact.

[37] Disjunctive propositions being reducible to conditionals, it is obvious that they too are in the nature of implicative compounds.

Moreover, be it noted that this division of compound propositions into implicative compounds and conjunctive compounds is not the same as the division into hypothetical and categorical compounds. True, hypothetical compounds, i. e., conditional and disjunctive propositions, are always implicative in character. On the other hand, not all categorical compounds are conjunctive. It is for this reason that we made our previous assertion that the division into implicative and conjunctive compounds cuts across the division into hypothetical and categorical compounds. Thus, while conjunctive propositions are obvious instances of conjunctive compounds, causal propositions are most certainly to be classified as implicative.

But what now of concessive propositions? That they are categorical compounds we have already seen. But are they also implicative, or are they conjunctive? Apparently, to answer this question it will be necessary to give a somewhat more subtle analysis than was required in the case of causal and conjunctive propositions. Thus for one thing, a concessive proposition would certainly seem to be bound up with and to presuppose an implicative or illative relationship between propositions. Thus one could hardly declare, " Although I can accomplish nothing, I am resolved to fight on," without in some sense presupposing an implicative relationship of this sort, " If a person can accomplish nothing, he will surely not fight on." At the same time, even though such an implicative relationship be presupposed, the thrust of the concessive proposition is precisely that of denying this implicative relationship. For what a concessive proposition does is, on the one hand, to affirm the antecedent of such a presupposed implication, and, on the other hand, to deny the consequent. And thus it is that any concessive proposition must be understood as denying the implicative compound which it itself presupposes.

But then if a concessive proposition has the effect of denying an implicative compound, it could not itself be such a compound. On the contrary, it is itself merely conjunctive.[38] And

[38] At the same time, one could hardly go as far as Prof. Quine (*Elementary Logic* p. 18) and assert that " when one chooses ' but ' or ' although ' in favor of

as evidence of this, one needs but consider how, in the example which we have given of such a concessive proposition, what was asserted was, first, that the person in question could accomplish nothing and, secondly, that, conjoint with this, and merely as a matter of fact, and contrary to what might be expected, the person was none-the-less going to fight on.

Very well, then, supposing one recognizes at least for purposes of argument, the legitimacy of our divisions into hypothetical and categorical compounds on the one hand and into implicative and conjunctive compounds on the other, it remains for us now to investigate somewhat further the true nature of these so-called implicative compounds. For, as we shall see later, it is these that have been most thoroughly misunderstood and misconstrued by the mathematical logicians.

To begin with, then, let us ask what it is in reality or *in rerum natura* that is signified by such an implicative compound. After all, in the Aristotelian tradition it is insisted that all logical entities—e. g. terms, propositions, and arguments—are signs or intentions. That is to say, they signify or represent something other than themselves to a knower. Accordingly, what is it that is signified by a so-called implicative propositional compound? Immediately, the answer that suggests itself is that such an implicative compound signifies a particular causal connection between certain realities *in rerum natura*. Thus consider propositions like this: "Since virtue is knowledge, it can be taught" or "This chemical change is being accelerated, because a catalyst is operative." Clearly, what these propositions are significant of are supposedly real causal connections in the world.

Indeed, this analysis is confirmed, if, by way of contrast, we consider what is signified by a conjunctive compound. For in this case it is not a causal connection between realities that is signified, but rather a mere accidental togetherness or coexistence of realities. After all, in Aristotle's natural philosophy it

'and,' it is only for rhetorical purposes." After all, a concessive proposition signifies the denial of a presumed conditional, whereas the ordinary conjunction does not necessarily convey any such significance at all.

is explained how, as a result of the limitless capacity of matter for form, it is perfectly possible for there to be any number of chance coincidences of realities without there being any causal connection between them whatsoever. In consequence, we can truthfully and meaningfully assert such propositions as: "This man is an architect *and* is bald"; "The horse was plowing in the field *and* stumbled and broke his leg"; "$2 + 2 = 4$, *and* New York is a large city." In other words, the logical distinction between such beings of reason as implicative compounds and conjunctive compounds finds its basis and foundation in the real distinction between those realities which are causally connected and those which coexist only accidentally and by chance.

But now, granted that an implicative compound is expressive of, or significant of, a causally ordered set of realities *in rerum natura*, we still have to inquire what implication, as a purely logical or objective relationship, actually consists in. Thus a causal complex of beings or realities is something real, whereas an implicative compound is only a being of reason. Hence even though the latter may mean or signify the former, the implication itself must consist of logical entities, not of real beings at all.

Or perhaps the point may be made clearer in some such fashion as this. Suppose we take a simple fact in nature, one with which we are all familiar, viz., that towels dry our hands, or, more specifically, that towelling material is absorbent. Now obviously, there is a cause of this absorbency of towels, and that cause is their capillary structure. In other words, here we have a simple, but clear example of a causal ordering of certain real entities in nature. For towelling material is real, and also its property of absorbency. Likewise, the capillary structure of such material is real, and as such constitutes a real cause of the absorbent quality of the towels.

But now this real causal complex in nature is signified to us through certain logical entities or beings of reason, viz., through the concepts of towelling, absorbency, and capillary action, as

well as through such propositions as " Towelling is absorbent," " Towelling has a capillary structure " etc. Accordingly, just as we asked what was the *cause* of the *fact* of the absorbency of towels, so also we may ask what is the *evidence* for the *proposition* " Towels are absorbent." And the evidence, we find, takes the form of premises in a familiar syllogistic type of argument: " Anything with a capillary structure is absorbent; Towels are things with a capillary structure; Therefore, towels are absorbent."

Presumably, therefore, if we human beings are to understand anything through its causes, we have to do so by means of syllogistic arguments. And in such arguments the fact which is to be explained is signified by a proposition in which two concepts are identified (e. g. towelling and absorbency); and the cause which is to explain the fact is expressed as a middle term (e. g. capillary structure), which has the function of mediating between the two concepts of the conclusion.

But now in the light of this analysis we should be able to gain an insight into the peculiar nature and structure of our so-called implicative compounds. Indeed, it will be found that the structure of such compounds in most cases [39] is none other than syllogistic. Thus to take the example of the absorbency of towels which we have just been discussing, clearly this could be expressed as a causal proposition: " Since towels have a capillary structure, they are absorbent." Or to take the ex-

[39] There is a very good reason for this qualification. Thus we sometimes come across propositions of this sort: " Since every physical body is subject to gravitational forces, nothing that is not subject to such forces can be a physical body." Clearly this is a causal proposition, and as such is an implicative compound. Still, it is not an implicative compound that is syllogistic in structure, being instead in the nature of what is sometimes called an *immediate inference*. Likewise, it is possible to find instances of implicative compounds that are in the nature of inductive arguments, e. g. " Since iron and copper and silver etc. are all conductors of electricity, we may conclude that every metal is a conductor of electricity."

Nevertheless, these important exceptions to the rule that every implicative compound is syllogistic need not concern us in this paper. In a subsequent paper, however, we shall want to examine, more carefully those implicative compounds that are expressive of immediate inferences. We shall find that most of the theorems of the propositional calculus are of this variety.

amples of causal propositions which we have already cited, these we find upon examination turn out to be nothing but enthymemes or abbreviated syllogisms. For instance, " Since virtue is knowledge, it can be taught." This readily becomes: " Whatever is knowledge can be taught; Virtue is knowledge; Virtue can be taught." Or again, " This chemical change is being accelerated because of the operation of a catalyst." This becomes: " Any chemical change in which a catalyst is operative is accelerated; This is a chemical change in which a catalyst is operative; This chemical change is accelerated."

Moreover, what is true of the structure of causal propositions will also be true, *mutatis mutandis*, of those other types of implicative compounds, viz., hypothetical propositions. For instance, in the ordinary conditional proposition there is an antecedent and a consequent; and, as we have seen, in the assertion of the proposition as a whole, what we assert is that the consequent is literally " consequent " upon the antecedent. But the only way [40] in which such a consequence is possible, is through the agency of a middle term. Indeed, we venture to suggest that when the ordinary conditional proposition is analyzed, its antecedent will be found to contain such a middle term, either explicitly or implicitly.

For instance, let us analyze a comparatively easy example first and then go on to a more difficult one. And for our easy example let us take still another variant of the Socratic proposition from the *Protagoras*, " If virtue is knowledge, it can be taught." Now what is it that here enables us to consider the teachability of virtue as a consequence of such an antecedent? Clearly, it is an implied major premise to this effect: " Whatever is a matter of knowledge is a thing that can be taught; Hence, if virtue is a matter of knowledge, it can be taught." In short, the middle term here is the notion of knowledge, and it is through its mediatory function that the so-called consequent is a genuine consequence of the antecedent. Moreover,

[40] Again, this must be qualified along the lines suggested in the preceding footnote.

it is in the antecedent that this mediating term is expressed.

Nevertheless, it must not be supposed that a conditional proposition is always just a simple enthymeme, requiring nothing but the explicit assertion of either a major or a minor premise to yield a complete syllogism. On the contrary, the conditional proposition may be an abbreviation for a whole sorites or series of syllogisms. And on account of this, it sometimes requires no little ingenuity to elaborate such a conditional proposition so as to make explicit all of the syllogisms and all of the middle terms that are implicit in it.

For instance, here is an example which Joseph [41] gives: "If the value of gold is determined by the amount of labor necessary to produce it, then improvements in mining machinery will tend to increase prices." Expanded into its complete form, this conditional proposition may be seen to involve two syllogistic arguments, the one being an argument in support of the minor premise of the other. "Whatever tends to lower the value of gold tends to increase prices; Improvements in mining machinery tend to lower the value of gold; Improvements in mining machinery tend to increase prices; Whatever tends to lessen the amount of labor that is necessary for the production of gold tends to lower the value of gold; Improvements in mining machinery tend to lessen the amount of such labor; Improvements in mining machinery tend to lower the value of gold."

Nevertheless, there is obviously something amiss with such a rendering of hypothetical propositions. Indeed, if our account of implicative propositional compounds is really to be made adequate, we must take cognizance of certain important differences between such of these compounds as are hypothetical and such as are merely categorical. For while both types of implicative compound really involve syllogistic arguments, still the expansion of hypothetical propositions into syllogisms must needs be somewhat different from the expansion of causal propositions.

[41] *Op. cit.*, p. 340.

Thus if we consider our two earlier examples, the one a causal proposition and the other a conditional, we can perhaps see in the concrete what is the nature of this difference. "Since virtue is knowledge, it can be taught; If virtue is knowledge, it can be taught." Now both of these propositions, as we have seen, are implicative compounds. Also, as we have seen, the implicative character of the compounds means that both of them involve a syllogistic argument: "Whatever is a matter of knowledge can be taught; Virtue is a matter of knowledge; Virtue can be taught."

Nevertheless, the conditional proposition may be seen to involve this syllogism in a different way from the causal proposition. For the causal proposition simply *is* the syllogism in abbreviated form. On the other hand, the conditional proposition, even though it may be said to involve such a syllogistic argument, still can not be said to be that argument as such. And the reason is that in the syllogism the minor premise is asserted categorically, whereas in the conditional proposition it is asserted only hypothetically.

In other words, so long as one is not certain of the truth of either the major or the minor premise of a given syllogism, then such a syllogism can only be asserted in the form of a hypothetical proposition. And the significance of such a hypothetical proposition is that it presents in its antecedent the middle term that *would* mediate between the subject and predicate of the conclusion, *provided* it be connected both with that subject and with that predicate. Thus in the example given, the concept of knowledge is one that *would* mediate between the notions of virtue and of teachability, *if* virtue really were knowledge.

Correspondingly, no sooner is the hypothetical character of the antecedent clause of a conditional proposition removed, than the conditional proposition itself is displaced by a regular categorical syllogism. This is illustrated in the familiar cases of *modus ponens* and *modus tollens*. Thus to take an example: "If virtue is knowledge, it can be taught; Virtue is knowledge;

Virtue can be taught." Frequently, such an argument is spoken of as being a hypothetical syllogism. But strictly speaking, there is really nothing hypothetical about it at all. For the minute one asserts categorically "Virtue is knowledge," then the hypothetical character of that proposition as it originally appeared in the conditional, is removed. And in consequence, the conditional proposition itself is no longer really conditional. Instead, what one now has is a straight categorical syllogism: "Whatever is a matter of knowledge can be taught; Virtue is a matter of knowledge; Virtue can be taught." [42]

So much, then, for our account of the nature of these so-called implicative compounds. Whether, in the light of such an account, mathematical logicians like Prof. Tarski would still be inclined to feel that these compounds even when so construed are, nonetheless, afflicted with such vagueness and complexity as to warrant the type of clarification and simplification that the truth-functional account is supposed to give—all this is of no matter. Suffice it to say that in their rejection of the traditional way of viewing such compounds, the mathematical logicians would seem not to have had the slightest knowledge or understanding of how these compounds were really to be construed, viz., as syllogistic.[43] Had they had such

[42] It is interesting to note how befuddled on this point have been so many of the more recent professedly Aristotelian logicians. Recognizing that on Aristotelian principles the categorical syllogism could be the only form of deductive argument, they have then been puzzled to know what to do with the so-called hypothetical syllogism. Their usual procedure has been to try to *reduce* the so-called hypothetical major premise to categorical form. This, however, is alike futile and unnecessary. It is futile because a hypothetical proposition simply is not a categorical one and can not be transformed into one. It is unnecessary, because as we have just shown, even though a hypothetical proposition is not reducible to a categorical proposition, a so-called hypothetical syllogism is really a categorical syllogism.

For illustrations of how this pseudo-difficulty has been a veritable torture to modern logicians, cf. Eaton, *General Logic*, pp. 162-166; Joseph, *Introduction to Logic*, pp. 339-344.

[43] So far from achieving anything like a proper understanding of the nature of conditional propositions, most modern logicians have so got the cart before the horse that they would interpret all universal categorical propositions as being in effect conditionals. This particular error, however, we must wait to deal with in a subsequent paper.

knowledge, it would scarcely have been possible for them to carry through their rejection in quite so summary and high-handed a fashion.

But, be all that as it may, it now remains for us to confront these two accounts of propositional composition—the mathematical and the Aristotelian—with each other, and thereby attempt a critical appraisal of both of them.

III. Criticisms and Conclusions

In proceeding to a comparison and contrast between the respective accounts of propositional composition that have been given by the mathematical logicians, on the one hand, and by the Aristotelians, on the other, we may note, to begin with, a few points of superficial agreement. Both traditions would seem agreed as to the basic varieties of propositional compounds. Thus conjunctions, disjunctions, implications, and for that matter even causal and concessive propositions,[44] would seem to be recognized by both traditions alike. But beyond this, the agreement does not extend. For when it comes to explaining what these varieties of propositional composition actually involve, the two traditions may be seen to be radically opposed.

Moreover, if we try to fix the focal point of this opposition, we may say that for the mathematical logician propositional composition is to be understood *truth-functionally*, whereas for the Aristotelian it is to be understood *intentionally*.[45] In other words, on the one view, what the propositions mean or

[44] It should be noted, perhaps, that of the mathematical logicians only Quine, so far as the present writer knows, has discussed causal and concessive propositions. As for the Aristotelians, they are not in the habit of discussing causal propositions, simply because, as we have seen, they consider them to be syllogisms. Nor is there any explicit treatment of concessives. However, the author is convinced that the treatment given above of these so-called concessive propositions is quite in accord with the Aristotelian tradition.

[45] In our subsequent paper we shall try to show that the opposition is really much more far-reaching than this. However, in the present study we shall confine our attention to this one point of opposition alone.

intend has nothing to do with their disjunction, conjunction, implication, or what not, whereas, on the other view, it has everything to do with it. Thus it is that for the Aristotelians a proposition such as "If $2 + 2 = 4$, then New York is a large city" is false and does not involve any implication at all, whereas for the mathematical logicians it is a perfectly good implication and is true.

Moreover, this difference between regarding propositional compounds truth-functionally and regarding them intentionally is at the root of another profound difference between the two traditions. And that difference is that for the mathematical logicians the distinction between hypothetical and categorical compounds, as well as the distinction between causal and conjunctive compounds,[46] are distinctions that simply can not be made. And the reason they can not be made is that all such distinctions are set up on the basis of possible relations in meaning or intention between the propositions concerned. Thus in the case of hypothetical compounds, as we have seen, the combining of the propositions is based on quite other considerations than the mere truth or falsity of the propositions combined. Instead, with such compounds the one proposition is mediated by the other through the agency of a so-called middle term, and this mediation is quite independent of whether the propositions thus compounded be true or false.

And as for implicative compounds, while it is true that some of these, viz., the causal propositions, are such as to entail the truth of both of the propositions that are combined, still the combination does not depend merely on the fact that both of them are true, but rather on the fact that the one is mediated by the other in the manner explained. In other words, the conjoint truth of two propositions might be called a necessary condition, but certainly not a sufficient condition, of their being compounded together in an implicative compound of the causal type. Indeed, as Prof. Quine himself has happily put it, "truth

[46] Of course, in one sense Prof. Quine might admit that such distinctions could be made; and yet at the same time he would hold that they were eliminable. Cf. *supra*, p. 19, note 1.

of a 'because' compound requires not only truth of the components but also some sort of causal connection between the matters which the two components describe." [47]

But now, if in the tradition of mathematical logic no hypothetical or implicative compounds can be recognized, does that mean that on such a view all compounds must be regarded as no more than mere conjunctions? Certainly, there would seem to be considerable plausibility to this interpretation. Thus, as we have seen, from the Aristotelian point of view any implicative compound, whether of the hypothetical or of the categorical type necessarily involves an intentional connection between the propositions thus compounded. On the other hand, a conjunctive compound involves no such intentional connection. Moreover, if such a conjunction involves no connection in meaning between the propositions conjoined, then it would seem to be precisely the sort of propositional composition that the mathematical logicians insist is the only sort. Indeed, an Aristotelian logician might well admit that conjunction could perhaps be given a truth-functional interpretation. Moreover, that this is the thrust of the truth-functional interpretation of propositional compounds would appear to be borne out by the mathematical logicians themselves. For frequently in the various propositional calculi, we find that an implicative compound is simply *defined* in terms of conjunction. Thus as a definition of implication we often find this:

$$p \supset q \equiv \sim (p \cdot \sim q)$$

or as a definition of disjunction, we find this:

$$p \vee q \equiv \sim (\sim p \cdot \sim q)$$

Indeed, Prof. Quine constructs his whole calculus simply in terms of conjunction and denial, and as a consequence he regards all other modes of propositional combination besides conjunction—i. e. "or," "although," "if—then," "because," etc.—as "theoretically superflous." [48] Here is his seemingly

[47] *Elementary Logic*, p. 26.

[48] *Elementary Logic*, p. 17.

unequivocal statement of the point: "The truth-functional modes of statement composition thus far considered have been seen to admit of being paraphrased in terms exclusively of conjunction and denial. The same is in fact true of all possible truth-functional modes of statement composition. So long as a statement is built up of component statements in truth-functional fashion—so long, in other words, as the replacement of any component by another statement of like truth value does not affect the truth value of the compound—we can translate the whole into an equivalent statement which is built up of the components in question by means solely of conjunction and denial. We can therefore look upon conjunction and denial as the sole basic truth-functional devices. . . ." [49]

But now if this is the real import of the truth-functional interpretation of propositional compounds—viz., that it regards all such compounds as being no more than conjunctions—then the implications of such an interpretation for the general nature of logic are simply incredible. For it should already be obvious, both to common sense and also in the light of our foregoing analyses, that conjunction is not an illative or inferential compound at all. That is to say, in a mere conjunction of propositions, the one proposition can in no wise be regarded as inferable from, or consequent upon, the other. However, if there be no other way of combining propositions save conjunction—or, what comes to the same thing, if all other ways of compounding propositions are reducible to mere conjunction—then, on the truth-functional view it would have to be recognized that there simply is no way whereby one proposition may be inferred from another or whereby one may be said to imply another. Of course, as a possible alternative one might say that, in their insistence upon the truth-functional interpretation of propositional compounds, the mathematical logicians do not mean to imply that there are no such things as implicative or illative compounds; all they mean is that such compounds are of no concern to logic.

[49] *Elementary Logic* pp. 28-29.

Nevertheless, on either alternative there would necessarily be set up a train of consequences which would appear to reduce to the absurd the whole enterprise of trying to interpret propositional compounds truth-functionally. Thus on the one hand, if it be said that there are no implicative compounds at all, all of them being reducible to mere conjunctions, then any such thing as proof or demonstration becomes simply impossible. For what is proof or demonstration but the making evident of a given proposition through the medium of still other propositions, from which the first is seen to follow as a consequence? But for one proposition to follow from other propositions as a consequence means that it is bound up with these others in an implicative or illative compound. Consequently, if there be no implicative compounds, there can be no demonstrable (sc. scientific) knowledge at all.

On the other hand, if it be admitted that there may be such things as implicative or illative compounds, but that it is not the concern of logic to treat of them, then it would follow that what has always been held to be the proper and principal concern of logic must now be considered as not pertinent to logic at all. Indeed, if the subject matter of logic be regarded as being comprised of the tools or instruments of knowledge,[50] then, since knowledge for us human beings is for the most part not immediate but mediate, being inferred or proved or demonstrated from previously known truth, it will follow that logic must be principally concerned with determining the precise nature of such instruments of inference or demonstration. But if we are told that the investigation of implicative compounds pertains not to logic at all, but rather to some other discipline, then the word "logic" itself becomes thereby hopelessly equivocal.

Besides, the obvious question that obtrudes itself here and that would seem particularly embarrassing is this: must not the mathematical logicians in the very development of their logical

[50] This, of course, is the Aristotelian view of logic. However, as we have seen, the mathematical logicians are nothing like so clear and precise on this point.

calculi presuppose the existence of just such implicative compounds as they consistently disregard in their stated accounts of propositional compounds? In other words, are not the theorems of any such calculus supposed to be proved; are they not held to be in some way or other inferred from prior theorems and postulates? But if so, then mathematical logic would not really be a science of logic or necessary inference at all, but rather would be like any other science in that it would presuppose logic and use logic, without itself being a science about logic.

Now the answer to this question is complicated by several factors. In the first place, the force of the question might seem to be more or less contingent upon whether the mathematical logicians consider that the development of a logical calculus should be in accordance with the matrix method or with the logistic method. If the former, then it would seem that all of the various theorems of such a calculus are not so much proved as tested.[51] In consequence they can not be regarded as being inferred from prior principles at all; [52] and the whole exfoliation of the calculus would appear to be possible without any reliance upon implicative relations between propositions at all.

On the other hand, if the logistic method of development be used, then the theorems of the calculus are regarded as being proved and inferred from prior principles. And the logisticians are quite explicit as to what the rules are according to which these proofs are effected. They are two in number: the rule of substitution and the *modus ponens* rule.[53]

However, the interesting thing about these rules is that upon examination they appear to involve a recognition of just such an implicative or illative relation between propositions as the mathematical logicians have most consistently tried to disregard. Thus, first, as to the rule of substitution, we find Prof. Tarski describing it thus: "If a sentence of a universal char-

[51] Cf. Quine, *Mathematical Logic*, pp. 5-6, 86-87.

[52] Cf. Lewis and Langford, *op. cit.*, p. 226: "The matrix method never uses the operation of inference."

[53] Cf. Tarski, *op. cit.*, p. 47, and Lewis and Langford, *op. cit.*, pp. 125-126.

acter, that has already been accepted as true, contains sentential variables, and if these variables are replaced by other sentential variables or by sentential functions or by sentences—always substituting equal expressions for equal variables throughout—then the sentence obtained in this way may also be recognized as true." And as an illustration of this, Prof. Tarski cites the following example.[54] As a universal sentence he uses: "From: if p, then q, it follows that: if not q, then not p." Then making the necessary substitutions, he derives from this the sentence (sc. proposition): "From: if x is a positive number, then 2x is a positive number, it follows that: if 2x is not a positive number, then x is not a positive number."

Now superficially and yet none-the-less strikingly, this rule of substitution would seem to resemble the *dictum de omni*. But if so, then such a proof by substitution would certainly involve an implicative relation between the proposition to be proved and the proposition by means of which it was proved. Moreover, this implicative relation would have precisely that character which we have already pointed out is usual in such relations, viz., that of mediation through a middle term.

And likewise, with respect to the *modus ponens* rule, we have already described how any so-called hypothetical syllogism is really a categorical syllogism in disguise. Hence if proofs of theorems in a logical calculus sometimes proceed according to a *modus ponens* rule, it will follow that all such proofs presuppose an implicative relation between premises and conclusions of the syllogistic type.

Accordingly, the conclusion would seem inescapable that any logistic development of a propositional calculus must necessarily presuppose the recognition of implicative compounds of the very sort that a truth-functional interpretation of propositional compounds must perforce disregard. Nevertheless, we would rather not press this conclusion in the present paper, for there are a number of complications that need to be cleared up before the point can be considered adequately established. Thus,

[54] *Op. cit.*, pp. 45-46.

for one thing, many of the instances of substitution that appear in the calculus would really seem to be cases, not of syllogistic inference, but rather of what the Scholastics would call *inductive descent*. And for another thing, even in instances of a procedure according to *modus ponens*, it would so often seem that in mathematical logic the hypothetical propositions that serve as first premises for the inferential operations in *modus ponens* are really hypotheticals that involve a relation of immediate inference, between antecedent and consequent, rather than hypotheticals that involve a relation of syllogistic or *mediate* inference. However, all of these difficulties we hope to clear up in a subsequent paper.

For the present, let us return to a consideration of calculi developed by the matrix method. For it would seem that if the mathematical logicians could rely exclusively upon this method, they might then avoid all presupposition of implicative or syllogistic compounds. In fact, for purposes of argument let us suppose that such a matrix method could suffice as a means for testing all possible logical propositions. And let us suppose also that by thus freeing themselves from any dependence on inference and proof, the mathematical logicians could develop their science without being obliged surreptitiously to introduce a type of propositional composition which by their own account is supposed not to exist. Even so, are the mathematical logicians really able to get around having to recognize some sort of implicative compound? The answer is "No," and this for two reasons.

In the first place, even though the logical theorems themselves may have been established without being inferred or proved, still these theorems, once they are set up, are regarded as being the principles or patterns of inference for all scientific reasoning whatever.[55] Moreover, when they are thus applied in the construction of so-called deductive systems, the deductions which they thus make possible are none other than

[55] Cf. Tarski, *op. cit.*, p. 44: "Almost all reasonings in any scientific domain are based explicitly or implicitly upon laws of sentential calculus."

deductions through implicative or illative propositional combinations. In other words, though not inferred or proved themselves, these theorems are supposed to become principles of inference when applied.[56] And as principles of inference these logical theorems may be seen to be nothing more nor less than expressions of implicative combinations of propositions.

But there is a second reason, as we said, why mathematical logic, even when it does not undertake to prove or infer its own theorems, must none-the-less take cognizance of so-called implicative or illative compounds. Thus by way of example let us take one of these very theorems, which, without having to be demonstrated, can simply be tested by the matrix method. Moreover, let us take as our example a theorem that we have already had occasion to cite and become familiar with, and let us examine it carefully.

$$p \supset q \cdot \supset \cdot \sim q \supset \sim p$$

Supposing the matrix method to have been used, this theorem may be presumed to have been established without any resort to implicative compounds. Also supposing the theorem itself to be interpreted truth-functionally, it does not itself have to be regarded as an implicative compound; instead, it would be a mere denial of a conjunction.

$$\sim (p \supset q \cdot \sim (\sim q \supset \sim p))$$

And yet this denial of the conjunction of $p \supset q$ and $\sim (\sim q \supset \sim p)$ is not to be interpreted as meaning that two propositions which might be conjoined actually happen not to be conjoined in a given instance. On the contrary, the mathematical logicians themselves would be the very first to point out that the above theorems holds for all possible values of

[56] Tarski's recognition of this very point is interesting. Thus even while arguing in favor of the truth-functional interpretation of conditional propositions, he admits that " there are situations—though not in logic itself, but in a field closely related to it, namely the methodology of deductive sciences—in which we talk about sentences and the relation of consequence between them, and in which we use such terms as '*implies*' and '*follows*' in a different meaning more closely akin to the ordinary one." *Op. cit.*, p. 31.

p and q.[57] In other words, the conjunction of $p \supset q$ and $\sim (\sim q \supset \sim p)$ is in effect asserted to be impossible. And on what grounds must it be regarded as impossible? The only answer that can be given is that a combination of a proposition of the form $p \supset q$ with a proposition of the form $\sim q \supset \sim p$ is not a mere conjunctive proposition, but rather an implicative one.

Indeed, these considerations reflect back upon the very attempt, which we mentioned earlier, on the part of certain mathematical logicians to reduce all forms of propositional composition simply to conjunction and denial, and to regard all compounds other than conjunctive ones as merely superflous. For now it should be obvious that the sort of propositional conjunction that is here made basic, while it may look like conjunction superficially, is actually nothing but implication.

Thus to say that $p \supset q$ may be understood simply as $\sim (p \cdot \sim q)$ is in a sense misleading. For the denial of the conjunction of p and $\sim q$ is in this case a denial for all possible values of p and q. But a denial for all possible values of the variables means that the conjunction is simply impossible. However, that the conjunction of p and $\sim q$ should be impossible presupposes, as its only possible ground, that q should be implicatively connected with p.

Or, to express the thing in terms of the intentional reference of the propositions in question, we might say that when p and q signify realities that are causally connected with each other, it is impossible that the realities signified by p and $\sim q$ should ever be found to be accidentally coincident *in rerum natura*.

But what, then, of the truth-functional interpretation of a theorem such as,

$$p \supset q \cdot \supset \cdot \sim q \supset \sim p$$

After all, as we have seen, whenever hypothetical propositions are interpreted truth-functionally, there would seem to be no alternative but to regard them as mere conjunctive compounds.

[57] Cf. Tarski, *op. cit.*, pp. 37-38, 42.

Accordingly, having seen that a theorem such as the above can not be regarded as a mere conjunction, we may also go on to ask whether it may be interpreted truth-functionally. Moreover, to say that it is interpretable truth-functionally is to say that the connection between the component propositions is in no wise dependent upon what those propositions mean or say.

But now is this the case with a proposition such as: $p \supset q \cdot \supset \cdot \sim q \supset \sim p$? Is it true that the consequence of $\sim q \supset \sim p$ upon $p \supset q$ is in no wise dependent upon the meaning of $p \supset q$? After all, $p \supset q$ signifies implication. And surely, one would not go so far as to say that the nature of this thing called implication has nothing to do with determining the consequent in this proposition. On the contrary, it is simply because of the nature of implication and what it involves that the conclusion can be drawn about $\sim q$ implying $\sim p$.

Or put it this way, if $p \supset q$ signified not implication, but, let us say, refrigeration or defoliation in cotton, we could not necessarily conclude $\sim q \supset \sim p$. In other words, it is entirely in virtue of what the antecedent means and signifies that we are able to posit this particular consequent and not some other.

Indeed, one wonders if this whole doctrine of the truth-functional interpretation of propositions may not have arisen as a result of a confusion of some such sort as this.[58] Thus in a proposition of the sort $p \supset q \cdot \supset \cdot \sim q \supset \sim p$, the connection between the two component propositions in the compound is in no wise bound up with or dependent upon the meaning of p or q. The proposition p can signify anything whatever, and so can q; it will still hold that $p \supset q \cdot \supset \cdot \sim q \supset \sim p$.

And yet be it noted that in this proposition, it is not p and q that are the *proximate* component elements of the whole proposition. Instead, the proximate components are $p \supset q$ and $\sim q \supset \sim p$. For it is these which as such are combined into the total and final conditional proposition. But now while it does not make any difference to the formation of this whole con-

[58] The discussion of the next few pages might profitably be regarded as supplementing our earlier analysis of the apparent motive behind the effort to treat all propositions truth-functionally. Cf. *supra*.

ditional proposition, what p and q mean, it does make all the difference in the world what $p \supset q$ means and what $\sim q \supset \sim p$ means.

In short, the point is this. In a proposition such as $p \supset q \cdot \supset \cdot \sim q \supset \sim p$, what are involved are so-called second intentions. That is to say, what are to be thought of as being signified or intended in such a proposition are not real things *in rerum natura* at all. On the contrary, these would be objects of first intention, and not mere logical entities like implication, disjunction, conjunction, etc., which as such are objects of second intention. In fact, in the proposition that we have been currently using as our example, viz., $p \supset q \cdot \supset \cdot \sim q \supset \sim p$, the particular logical entity that is being considered in second intention is none other than implication. And implication is definitely only a being of reason and not a real being, since it is by nature a mere *logical* relation, holding between conceptual or objective beings like propositions, and in no wise a *real* relation holding between things *in rerum natura*.

On the other hand, the p's and the q's in the same proposition may be presumed to stand for propositions in first intention, i. e., propositions signifying facts in reality. Nevertheless, for the truth of a proposition like $p \supset q \cdot \supset \cdot \sim q \supset \sim p$, which is concerned with objects of second intention, it does not make any difference what it is that is signified in first intention by p or by q. However, merely because in such a proposition we can disregard first intentions altogether, that certainly does not mean that all intentions can be disregarded. On the contrary, the condition that is expressed in the proposition is entirely dependent upon the second intentional meanings of the proximate component propositions.

Now could it be that the mathematical logicians, aware that the first intentions of the propositions appearing in their theorems, were of no relevance in the construction of those theorems, proceeded to conclude from this that meanings and intentions as such were irrelevant to the composition of propositions in logic, or, for that matter of any propositions? But

whatever the source of the confusion, confusion it certainly is. And the sooner the illusion is dispelled that all propositional composition may be understood truth-functionally and in complete indifference to what the component propositions mean or say, the better for logic.

So much, then, for some of the confusions and inconsistencies that are necessarily attendant upon the mathematical logicians' efforts to treat all propositional compounds truth-functionally. And yet confusion and inconsistency are not the only faults that are attendant upon this attempt at disregarding completely all intentionality in logic. For there is a certain sense in which one might say that as soon as one abstracts from intentionality in logic, one has abstracted from logic itself. Thus it would seem that there could be little argument but that what the Aristotelians have called objects of second intention are perfectly legitimate and extremely important objects of scientific investigation.[59]

Not only that, but this way of characterizing these objects, viz., as objects of second intention, would certainly seem adequately to discriminate such objects from those of any other science. Now, of course, whether one uses the word "logic" as a name for this particular science or not, is really of little moment. And yet the word having come to have this meaning through several centuries of usage, why change it?

At any rate, whatever one may decide to do with the word, the important thing is to keep in mind that whenever in one's science one does not profess to be dealing with meanings or intentions, then one is, *ipso facto*, not dealing with that body of material which has traditionally been called "logic." Consequently, when the mathematical logicians say that they are

[59] Thus as may be seen from the earlier quotation from Tarski, the mathematical logicians do seem to recognize objects of this kind. In fact, Tarski's very language is significant when he speaks of those "terms . . . which represent an indispensable means for conveying human thoughts and carrying out inferences in any field whatever; such words as 'not,' 'and,' 'or,' 'is,' 'every,' 'some' . . . ."

But unfortunately, not having bothered to analyze such entities philosophically, the mathematical logicians do not seem to have appreciated the peculiar significance of their role as objects of second intention.

disregarding the intentions of propositions and are considering possible relations between propositions quite apart from their meanings, one may well ask whether they are any longer talking about propositions. In fact, must they not be dealing with objects of first intention and not with objects of second intention at all?

And as one reflects upon it, the more one is struck by the fact that perhaps it might be possible to interpret the calculi of the mathematical logicians in some such fashion as the following. Thus as we have seen, when one tries to interpret such a calculus as a calculus for propositions, the thing just won't work. And yet in a sense the calculi as such still stand. There they are as fully elaborated mathematical systems. But systems of what and about what? Perhaps instead of considering the p's and q's as standing for propositions, we might let them stand for something else—say, for certain real entities, or in any case for entities that are objects of first intention rather than of second intention.

Now that such other-than-logical interpretations can be given to these calculi is what we should like to suggest. But more than a suggestion it cannot be, it being neither appropriate in this already overly-long paper, nor generally within our competence, to develop such a suggestion at any length. Nevertheless, this much should be obvious: if these calculi are not about propositions or logical entities at all, then they must perforce be about objects of first intention. But such objects of first intention can be either of two basic kinds—either fictional beings or real beings.

Suppose then, we first consider fictional beings. If it is these that our calculi are about, then the calculi must be regarded as being concerned simply with the stuff that games are made of, i. e. things like clubs or spades in bridge, or pawns or bishops or castles in chess. Moreover, just as in any game elaborate descriptions may be worked out of the elements in the game and their relations to one another, as well as complicated rules governing the moves or plays that these elements are

susceptible of, also in our present example, the p's and q's and r's might be the elements of the game; the $\supset$'s and the $\vee$'s and the $\cdot$'s could then be their possible interrelations; and finally what is describable under the heading of the matrix method or the logistic method would be the rules according to which the elements could be manipulated.

As a matter of fact, this possible interpretation has already been anticipated by some of the mathematical logicians themselves, although it never seems to have occurred to them that this would make their calculi quite irrelevant to logic. Thus Prof. Lewis has suggested: "Whatever more it may be, the matrix method at least is a kind of game which we play with recognizable marks according to certain rules. If in any game which deals with any kind of things, p's and q's, there is an operation or move, pIq, which according to the rules can be taken, when p has the property A, only if q also has the property A, then *ipso facto* if p has A and pIq is allowable, then q has A." "Thus it does not matter whether $p = 1$, represents 'p is true' or 'p is a curly wolf,' nor whether pIq represents 'p implies q' or 'p bites q'; if the rules of the matrix game are such that when $p = 1$, pIq holds only if $q = 1$, then in the nature of the case, any q such that, for some p which always has the value 1, pIq holds, will be such that q always has the value 1." [60]

But now for the second alternative as to what the so-called propositional calculi might be about, supposing them not to be about those peculiar second-intentional entities that are the proper concern of logic. The first alternative was that they might be about mere fictional beings; the second is that they might be about not beings of reason at all, but real beings that either do exist or could exist *in rerum natura*. Thus the p's and the q's might stand for quantities of a certain sort, let us say, or perhaps substantial chemical elements, or possibly qualities, etc. Likewise, the symbols $\supset$, $\vee$, $\cdot$ could stand for the various kinds of real relations that the entities in question might stand

[60] *Op. cit.*, p. 227.

in with respect to one another. Thus quantities as we know, are related to one another as greater or less or equal etc.; qualities are related as similar or dissimilar etc. Accordingly, some such interpretation as this might be found for the relations between the elements of the system, just as it was found for the elements themselves. And finally, just as quantities are subject to addition or division, or transposition, etc., and just as chemical compounds are subject to analysis and synthesis, etc., so also the elements of this system, standing in certain recognized relations to each other, may be manipulated so as to give rise to various new combinations and arrangements. Moreover, the nature and character of these manipulations would be such as are described under the headings of the matrix method and the logistic method, it being understood that on this present interpretation both of these methods would be completely dissociated from any purely logical connotations such as inference or proof.

Of course, it is not suggested that any such interpretation of these calculi has been found, or even will be found in the future. And yet the thing is at least conceivable. And in any case, the examination of this very type of question is peculiarly necessary at the present time, particularly because the mathematical logicians, whether through indifference to or ignorance of first philosophy, have quite neglected all questions as to the being of the things they are talking about. In fact, the point is of peculiar relevance to the whole question of the relation between logic and mathematics. For as is well known, the mathematical logicians have quite cavalierly lumped the two disciplines together as being fundamentally the same kind of thing. And yet, in so doing, they may have unconsciously distorted the nature of logic altogether, treating its objects as if they were, like mathematical entities, objects of first intention,[61] and forgetting completely that it is with second inten-

[61] Of course, in a way this merely begs the whole question, for the fundamental question simply is one as to whether mathematical entities are objects of first or of second intention. However, if present-day philosophers of mathematics would

tions and with these alone that the logician has to deal. Likewise, to suppose that merely because one has described certain highly abstract entities and has worked out the theorems pertinent to them, one has actually developed a science of logic, is wholly unwarranted. Rather it would seem to be a case only of *using* the science of logic in order to develop another and very different science, viz., mathematics, just as one has to use logic in the development of any science whatever.

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only recognize that this is the fundamental question with which they have to deal, it would certainly make for clarity when it comes to discussing the relations between logic and mathematics.

BOOK REVIEWS

Art and Faith. An Exchange of letters between Jacques Maritain and Jean Cocteau. New York: Philosophical Library, 1948. Pp. 138. $2.75.

This small book contains an exchange of letters between M. Jacques Maritain and M. Jean Cocteau, between a philosopher and a poet, concerning the conversion or return of Cocteau to the faith and certain matters pertaining to a philosophy of art. The two letters were written over twenty years ago, but they have been published in English translation only this year. The quite difficult translation seems well done by Mr. John Coleman. The letters, in rather large measure, are peculiarly French and peculiarly limited to the post-war period in France, a double difficulty the American reader has to overcome to appreciate fully many of the implications in the correspondence.

The real merit of the book is in the almost delicate account it gives of the conversion of a soul to God. It is eloquent testimony to the marvelous workings of grace, to the influence of human instrumental causality, and to the genuine catholicity of the Catholic Faith. The latter point is evident by the fact that poetic as the manner is in which the conversion is presented, involving nuances and symbolism in full dress, the actual working of grace is nevertheless as unmistakably clear as in the conversion of a banker. The book is thus one more valuable instance how the faith can and does reach all manner of men in an infinite variety of ways and how, at the same time, it draws from an almost incredible diversity the literal adherence to the one Church and the one Faith and the one Baptism.

The working of grace, the human instrumental causality of which Maritain, despite his modest disavowal, is a chief instance, is delicately revealed throughout the book.

"I lost my seven best friends," writes Cocteau. "This is as much as to say that God, seven times, bestowed graces on me without my noticing. He would send me a friendship, take if from me, send me another, and so on. I would let go of the bait and fall stupidly back in again. Don't go and think He was sacrificing youth; He was dressing up angels. An illness or war serves them with a pretext to undress" (p. 21).

And at the critical moment, Cocteau writes, describing the providential disposition of a Father Charles and Maritain himself: "Lightning is disconcerting. Sometimes it can be a very light red ball which comes into a room, moves about, and leaves without harming anyone." "Jacques, was

this your trap? Were you awaiting this minute? A heart entered the room; a red heart surmounted by a red cross in the middle of a white form that glided about, bowed, spoke, shook hands. This heart hypnotized me, distracted me from the face, beheaded the Arab's robe. It was the real face of the white form, and (Fr.) Charles seemed to hold his head against his breast like a martyr. . . . It was then, Maritain, that you pushed me. Pushed me in the back by a blow from your soul, which is an athlete; pushed head first. All saw that I was losing my balance. Nobody came to my rescue, for they knew that to help me would have been to lose me. Thus I learned of the spirit of this family, which Faith brings to us instantaneously, and which is not one of the least of the graces of God" (pp. 37-39).

To this Maritain replies: "It was then you met Father Charles. If there was conspiracy, it was the angels. A telegram warned me of his arrival the very day you were to dine at Meudon. When he entered we knew at once, by a great eddy of silence in our souls—and which lasted until the end—that he came only for you. This heart that you draw at the bottom of your letters, he was wearing over his chest, but with the cross planted in it. Solitude was sending you a contemplative; contemplatives and poets understand each other: a man accustomed to the ways of Heaven was at ease with your invisible. And then Charles' simplicity, his inner freedom, his self-effacement in love, that was the style you liked—in a work done by God" (p. 83).

With all the poetic allusions and ingenious employment of verbal images and even poetic puns (which the translator notes, once in desperation), the underlying reality is still not lost sight of; fundamentally, it is very simple and is thus forcefully expressed at occasional and necessary times as when, in the original, Cocteau writes: "Je demandai grâce. Il était si simple de demander la Grâce."

When we turn, however, to those parts of the brief book which deal with a philosophy of poetry the result, in general, is not so successful. Perhaps the major reason for this is the carrying over of the poetic mode of discourse into the sphere of what should be philosophical analysis. It would be a mistake to be unsympathetic or insensitive to such a manner of approach. Indeed, the approach in terms of the creative artist in fine art is a necessary element, and we should seek to understand all that he has to tell us. We should, further, not lose sight of the fact that Maritain is writing to a specific poet in a rather individual manner. Yet, with due allowance for all this, and insofar as the book intends to offer points on a philosophy of art, the rather exclusive poetic mode of discourse hinders rather than becomes an instrument of philosophical penetration. The poetic symbolic mode and the philosophical literal mode do not usually mix well at the same time and on the same point. Even when the symbolic mode

is used successfully, as in the case of Plato, the consequences on the part of the reader are more likely to be disastrous, as is evident from the usual sort of interpretation made of Plato. No doubt Maritain, in a desire to communicate fully with the poet, overlooked the inherent danger and ambiguity involved in a primarily poetic description of a philosophy of art.

By way of indicating such a difficulty briefly, a point or two on poetics can be considered summarily. One point is the nature of poetry and its relation to philosophy and the supernatural order. It would seem to be especially necessary to avoid confusing these three, particularly since the poetically inclined, almost by a temperament, tend to exalt poetry beyond its proper end and to insinuate something of an identification with philosophical truth or even supernatural truth. Maritain himself seems rightly concerned to avoid such a confusion when he states: "Between the world of poetry and that of sainthood there exists an *analogical* relation—I use this word with all the force metaphysicians give it, with all that it implies for them of kinship and distance. All errors come from the fact that people misread this analogy: some swell the similarity, mixing poetry and mysticism; others weaken it, making poetry out to be a craft, a mechanical art" (p. 88).

But in the very next paragraph he adds: "Yet poetry is from on high—not like grace, which is essentially supernatural, and which makes us participants in what belongs to God only, but like the highest natural resemblance to God's activity." And in explaining "highest natural" he adds in a footnote: "I say 'natural' in opposition to the essential supernaturalness of Christ's grace. This does not alter the fact that in another sense, just as first philosophy is called metaphysics, poetry can be said to be super-natural, insofar as it transcends not the whole order of created and creatable nature, but of sense-perceivable nature and of all the laws of the material universe, and as its values are of a transcendental order" (pp. 88-89).

We are concerned here with the nature or status of poetry. We cannot say in any literal sense—and it is precisely at such points as this that we must speak analytically and precisely—that poetry is "super-natural." Rather, it is quite the opposite that is true: poetry, and all the fine arts, remain peculiarly human and properly natural in that they conform so adequately with human nature and its proper operation. We can, of course, speak of a truly creative poet as a superior man and we can even speak very analogically of his poetic gift as "divine," but all this remains within the scope of proper human causality. Sometimes, in fact, we refer to philosophy (specifically, metaphysics, as Aristotle did) as more divine than human, and in this case we have a literal basis for the assertion insofar as the knowledge to be gained is more beyond man than proper to man. But this is precisely not the case with poetry or any of the fine arts; we

refer here both to the kind of knowledge poetry has and to its peculiarly human attainment. The fine arts, in fact, are the most proper natural human perfections.

This is evident in two ways. Positively, it is indicated by the fact that all men take at least some delight in the works of fine art and can be reached, however little at times, through some one of the fine arts. Negatively, we have the historical evidence of the persistent endeavor on the part of man to reduce philosophy to the more human level of art (even, vulgarly, to something like a " story " of philosophy at times).

Further, there seems to be a misconception of the nature of poetry to regard it as transcending the order of sense-perceivable nature. It is true, as Aristotle points out in the *Poetics*, that poetry attains something universal in which respect it is superior to history, for example, in terms of knowledge. In this sense we can speak of it as exceeding the limit of the factual order of sensation. But in another sense, it precisely does not transcend sense-perceivable nature to the exact extent that the universal attained in poetry can be known only as it is realized sensibly—as a character of a certain kind is realized and known only in this portrait of these colors and lines. It is, rather, in philosophy that we transcend sense-perceivable nature insofar as we abstract the universal from the sense singulars and know it apart from the sense singulars. In this way we see that poetic knowledge is a kind of mean between the fully universal knowledge obtained in philosophy and the pure perception of singulars obtained in sensation. The very mode proper to poetic knowledge requires the realization of the universal in the sense singular. And this is why art is so peculiarly human; it joins so intimately the powers of intellect and sensation in man. It is also why art is enjoyed by man in a way that philosophy, being too intellectual, is not. It is necessary to stress this literal distinction between philosophy and art because it seems nowhere explicit in the book, its absence therefore being an occasion for misconstruing the relation and distinction between the two, as Maritain himself appears to do when he speaks of poetic inspiration as a " special inspiration which is above the deliberation of reason " (p. 89).

Again, through a lack of sufficient literal distinction, it almost seems as if Maritain were even compromising the difference he himself insists upon between poetry and the supernatural order. There is more serious danger in a confusion here than between poetic knowledge and philosophical knowledge, precisely because of the plausibility of seeing too much relation between the symbolic mode of the poet and that of the mystical theologian or saint. This has led some to the error of regarding the works of St. John of the Cross, for example, as poetical in character. The difference, however, between the poetic order and the mystical order is as vast as possible in knowledge obtained by man, the latter essentially and wholly

supernatural and the former properly human and (in the order of knowledge as such) the lowest. Mystical knowledge uses the symbolic mode to make somewhat intelligible for us that which is too intelligible for us. Poetic knowledge uses the symbolic mode to make more intelligible for us that which is less intelligible by nature. Only after the establishment of such literal distinctions can we draw analogies or likenesses. Without them, such passages as the following in Maritain, are certainly open to misunderstanding: "Poetry, in its pure spiritual essence, transcends all technique, transcends art itself. . . . Poetry is an image of divine grace. . . . In one sense poetry is not of this world, it is in its way a sign of contradiction: its kingdom is also in our midst, within us . . ." etc., (pp. 90-91).

Another fundamental point, touched upon in this book, is the relation of art to prudence, i. e., to the moral order. Maritain writes: "The point is that art stands in a line that is not the line of man's good. From this comes its strength: it is free of the human, it is not constrained like prudence to regulate with regard to an end fixed in advance, in the mess of the contingent, the indetermination of free will; art has for its end only the object it has chosen; it despotically dominates its matter" (p. 92). And also: "Moreover, wisdom and art are two independent absolutes. All sciences are subordinated to wisdom by the very reason of their objects. This is not the case with art: it comes into the midst of our hierarchies like a moon prince whom etiquette has not foreseen, and who embarrasses all the masters of ceremonies. Taken in itself, and in its pure formal line, it has with human and divine values neither subordination nor co-ordination, it depends by its object neither on wisdom nor on prudence; all its dependence on them is on the side of the human subject who practices art, *ex parte subjecti*. It can be mad and remain art; it is man who will pay the cost" (pp. 116-117).

Maritain here attaches an absolute independence to art that is impossible to maintain. On this matter, we shall confine ourselves to the specific question of the relation of art to the moral order. It is clear, at the outset, that art and prudence (as the cardinal virtue in the moral order) are distinct as virtues, as practical habits of the intellect; the classic texts on this are familiar to all. But the precise signification of this distinction and the context in which it has arisen seems not always to have been fully grasped. In the appropriate Aristotelian and Thomistic texts, art is taken, when this distinction is made, generically and without any specific consideration of fine art. What we now call the "fine" arts were not a special problem nor even a special classification in medieval times. The instances adduced by St. Thomas when distinguishing between art and prudence show that if he is referring to any kind of art explicitly, it is to servile art.

Now in servile art it is true that art precises from any moral considera-

tion; for example, the " essence " of the knife is to cut simply, and nothing more. But the works with which fine art are concerned, the things which fine art makes, cannot precise altogether from the moral order. This is because the object of imitation in fine art differs from that of servile art. All fine arts have as their *proper* object imitation of human action, suffering, or thought, as is evident inductively and analytically. But human action, suffering, and thought, precisely as human, fall within the moral order and therefore under the ordering of prudence. That is to say, every human act as human is a moral act and since the proper object of imitation in fine art is some human act, and since no human act in the concrete is indifferent morally, then all fine arts are concerned with an object of imitation which necessarily involves also a moral principle.

A sign that this is the case is indicated by the diversity of taste in art. All men would agree that the end of fine art is to make something pleasing to man—to make something artistically beautiful which, in being known, brings about the appropriate delectation. But while all men would agree in that, they often differ on *what* pleases, which is to say they often disagree in their taste and judgment of what is beautiful. Why does this happen? In part, it is because what pleases man depends upon his moral formation, and as a man is formed morally so will his taste in art be formed. (This does not mean, of course, that moral formation is the *sole* criterion of what is beautiful.) Thus a man is pleased when a work of fine art conforms to his moral nature, displeased when it does not. A chaste man will be pained by representations of excessive sensuality; an unchaste man will be pleased by such representations. It is evident also that the creative artist will make an object that is in conformity with his moral nature, and in this way we see that this conformity with a moral principle is in the object itself and not only in the way the beholder views the object. In this connection it should be noted that in the *Poetics*, where Aristotle is considering a fine art formally, he employs moral principles as well as artistic principles, e. g., in the analysis of the tragic hero, the unity of the plot, and so on.

In varying degrees, the object of imitation in all the fine arts becomes specified through moral as well as artistic principles—even in music, whose object of imitation is the least intelligible. Music imitates the movement of the human emotions through the instrumentality of the voice. Since the movement of the emotions in man is either ordered by reason or not, even in music a moral principle enters into the object of imitation in some way. Thus we see that fine art not only cannot actually precise from moral considerations, but must actually employ moral principles in determining the beautiful in fine art. In other words, prudence, as the cardinal virtue of the moral order, enters in as constitutive of the object of imitation in fine art.

It would, of course, be erroneous to conclude from this that because the object of imitation in fine art falls within the ordering of prudence that the morally virtuous precisely as virtuous is the proper principle of fine art. It is true that the most perfect imitation in fine art will be imitations of good men in their action, character, or thought, yet this is not precisely because of the virtuous as such, but rather that the virtuous is that which is best ordered, and it is the best ordered that is the most beautiful. Consequently, the beautiful (not as a transcendental, if it is, but the beautiful as realized in art) is the proper principle of art, and it is this which justifies the original distinction between art and prudence which Maritain is rightly concerned to maintain. However, the allied point is that the beautiful is realized in fine art only through the ordering of virtue in human action, the object of imitation. Or to state it in another way: it is the order in an object that makes it pleasing to contemplate and virtue has this proper function to make human acts well ordered; it is precisely such good order that is imitated to make the artistic object beautiful. In this way, the object of fine art is specified by the moral principle without denying the legitimate distinction between art and prudence.

Failure to acknowledge the relation between art and prudence has led to many misconceptions producing a kind of divorce or, rather, a real opposition between art and prudence that is certainly foreign to the intention of Plato, Aristotle, and St. Thomas. This seems to have happened either because of a failure to distinguish between a generic conception of art as it is treated in the classic texts from a specific treatment of fine art, or from an undue fear of moralizing art which, of course, is an error in the opposite direction.

Despite these criticisms, it should be emphasized, finally, that the end achieved by this brief book is not seriously diminished in its practical effect, which is a testimony to the working of grace. Maritain has an admirable sensitivity for the practical needs of his friends and colleagues. He sees the solution for the real problem in the contemporary world, a problem that is not only intellectual but radically spiritual as well. As he is concluding his letter to Cocteau, he writes: " A terrible pity rends me at the thought of the generation that is twenty years old today. The best among them go to the worst. Whose fault is it? That of the abominable world of which they are victims. And especially ours, we Catholics. For we are responsible for everything, having the redeeming light in our wicked hearts of men. Insofar as we stop it and diminish it, we increase the weight or darkness. . . . Many of those who believe themselves to be our enemies are in reality closer to us than they think, or than we think. They desire with that remarkable impetuosity this same God that we love, that we do not love enough. If we had loved Him more, would they not know Him? "

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L'Etre et l'Essence. By Etienne Gilson, Paris: J. Vrin, 1948. Pp. 328. 500 fr.

What is required of a good historian of philosophy? If he is to report past ideas, like a telescope describing the stars, it would seem that he must leave his own philosophy aside in order to achieve objectivity, and the ideal would be that he have no philosophy at all so that each of the passing philosophers could be drawn to an impartial scale. The result is a series of thumbnail sketches which a beginner in philosophy might be required to read and be tempted to memorize. The more initiated would prefer to get their facts more completely from a first-hand study of sources since the historian yields them no original ideas; he only saves their time.

Moreover, such pure photography of the past makes for dry reading. It does not relate by-gone thinkers very profoundly to each other, except to bury them in the same cemetery; it fails to detect those larger themes that make the whole history of philosophy something meaningful for the present, prompting the living to digest the truths of their predecessors and to profit from their failures. In philosophy, even error should not die in vain.

Another way of writing the history of thought is to have a philosophy in one's own right, fastening one's mind on the ultimate peak of reality and describing the struggles of other systems to ascend it. Such an historian, being a philosopher, can make sense out of past systems as different approaches to a single subject, that which is. As a philosopher, he will detect those general relations which make philosophy itself what it is, apprehending, so to speak, the unity or " essence " of philosophy which a pure historicism of thought cannot pierce. As a realist in philosophy, and only a realist can make sense here as elsewhere, he will make the past fruitful for the present by showing its trials and its triumphs, its rewards and its punishments. Such a philosophical historian of philosophy will attend not only to what a man meant to say but to what he said really meant. He will thus probe the principles of other thinkers while he is searching the principles of reality for a yardstick. The comparison between the two will not only make the past a meaningful network of what other men have thought; it will help the present to know what it too should think, as it scans experience for the ultimates.

Etienne Gilson writes the history of philosophy in this second and more philosophical fashion. He has long recognized, to recall the title of an earlier work, that there is a unity in philosophical experience. In the present book, which may well rank as his greatest contribution, he defines more fully what that unity is. From Parmenides to Kierkegaard, the history of philosophy is here unrolled out as a series of approaches to being, that which is. Carrying out the implications of each philosopher who has had a

seminal influence, this modern *de Ente et Essentia* reaches two goals: it presents a panorama of the whole of western philosophy with the simplicity that only greatness can bring to this task, and it likewise develops the doctrine on being, essence, and existence not only as an historical problem but as a metahistorical answer.

Gilson believes that the greatest danger in philosophy is the temptation to conceptualize. Unfortunately, he does not develop very deeply what he means by the term " concept," but it would seem that he has in mind the Pythagorean mistake of turning a transcendental into a category. Parmenides, the originator of *ontology* in the literal sense of the word, identified being with thought. His mistake was continued in a more subtle way when Plato hypostasized Ideas. Even Aristotle, though he recognized the reality of substance and to that extent asserted the primacy of the existing, never quite struggled away from the Platonic doctrine of essences as the intelligible components of things; as Ross points out, τί ἐστι in Aristotle and τόδε τι never quite got together. Greek philosophy thus sums up as an essentialism, even though the greatest of the Greeks had a vague and intermittent glimpse of a region beyond concepts and beyond essences.

The problem of essence and existence, implicit in the texts of Aristotle, came to a boiling point in the middle ages, especially in Avicenna and Averroes. For the first, finite existence was taken as a kind of accident in the hierarchy of predicables, while Averroism developed into a full-blown denial that essence and existence were distinct. Both of these Arabian streams were faithful to the interest in substance, so apparent in the Aristotle whom they believed to interpret. The extremism of each was a kind of *felix culpa* which enabled St. Thomas Aquinas to think out the true metaphysics of creaturehood and to set essence and existence into a realistic framework as distinct but not separated *a parte rei* and as intimately related to each other in spite of their diversity. Gilson believes that if essence is intelligible it is because of existence and that, though there is nothing beyond being, there is a stratum of being beyond essence where a metaphysical realism must install itself and which it must never allow itself to forget. Essence, Gilson is willing to agree, is that which makes a thing what it is, but it cannot be understood fully without reference to existence, the supreme act. Finally, the human mind mounts to Existence itself which is the final reason for being as well as for intelligibility. It is the existential reference of being that explains how ontology, the study of being in general, and theodicy, the study of the Cause of being, can both be metaphysics and not give rise to sciences specifically diverse.

Gilson does not hold that existence is beyond the intelligible but only that it cannot be conceptualized. He holds that man knows it but through judgments rather than through concept, citing St. Thomas to support the conclusion that both the being and the truth of things are attained in the

second operation of the intellect. Gilson thus holds that existence is not beyond being but beneath it. Being is that which is. It is real and intelligible, essential and existential, since it is not simply " that which " but that which *is*. It is being and not simply essence that is the object of the metaphysics which St. Thomas conceived.

But the solution which Aquinas brought to the central problem of metaphysics lingered only briefly on the stage of philosophy, so much so that even some of his disciples, *soi-disant*, later came to doubt whether he even held the real distinction between essence and existence. Scotus returned for his inspiration to the Avicennian doctrine of the three modes by which a universal can exist and concluded that essence in each mode is never without the existence proportioned to it (p. 129). Neither including nor excluding existence, essence, according to Scotism (p. 128), is a kind of pure possibility, and without that reference to existence which it has of its nature, essence is here reinstated as the chief interest of metaphysics which thereupon loses its existential character and becomes once anew an essentialism. Suarez, concentrating on being in its substantival sense (*ens ut nomen*), came to view actuality as a particular form of possibility, and when Descartes studied philosophy at La Flêche the essentialism of Suarez was what he learned as Scholasticism.

But it was Wolff, an intellectual grandson of Descartes through Leibniz, who applied the word *ontology* to designate the study of being in its abstract or essential character and who set a style that leading Scholastic manuals have been inclined to follow ever since. Besides this misfortune which later Scholastics inherited directly from Wolff, there is the further fact that the Wolffian rationalism was a formative influence upon Kant. Taught at the University of Königsberg by F. Schultz, one of Kant's masters, the Wolffian doctrine that ontology is the study of the possible was the focus for Kant's knowledge of Scholasticism, and from it, the critical idealism of Kant which Gilson describes as " a neutralization of existence " issued forth as a protest; it was Wolff that lulled Kant into his " dogmatic slumber." Hegel's subsequent attempt to deduce existence and Kierkegaard's protest to assert it as an ultimate conclude the historical developments which Gilson traces.

All of this philosophy of the history of philosophy is extremely valuable. The reader not only learns facts; he learns lessons. It is not only that the subject matter is important. Gilson's method of presenting doctrine through historical techniques is worthy of consideration by itself. He leads the past all the way up until it rejoins the present intellectual struggles of man, ever searching after truth but inclined to release the precarious hold he can gain on it because it is more comforting to conceptualize. It is excusable that there is no chapter in this book devoted to Bergson since he could not be fitted in without a longer study of the post-Kantian era in

philosophy which Bergson wished to reform. In Maritain's case, there is a feeling that an insistence on the existential character of Thomistic metaphysics may be owed in part, and then only psychologically, to Bergson. With Gilson too, even though Bergson had perhaps only a vague and indirect influence on his formation, there is a feeling that the philosophy of the concrete, which Bergson sensed to be necessary and which he constructed in a faulty form, here receives its fulfillment.

It is the temptation to put a Bergsonian *irrationale* at the roots of the real which might bother the reader of Gilson's book, and lest another metaphysical mysticism rise up, the danger should be singled out. Gilson vaguely warns us against it in his chapter on Kierkegaard, and though he has a chapter on our knowledge of existence, there may be more to say on the subject. It may be repeated that Gilson rightly insists on being as intelligible and on existence as the ground of its intelligibility. He simply repudiates the philosophies which attempt to conceptualize being, without regard to the existential character which can not be conceptualized. One can not ask *what* existence is and seek the answer through concept. Existence does not have an essence and is not the proper subject for the question *what?*

Allied to this whole question is Maritain's doctrine on the intuition of being and especially the problems raised by the new reading of *In Trinitate Boethii*. Here, as Geiger has singled out, St. Thomas seems to describe the knowledge of being in terms of a *separatio* which appears to mean that such knowledge is completed in the negative judgment. Gilson does not employ the term *intuition* nor does he develop any principle that could be confronted directly with the Maritain view. Though he deals at length with the problem of our knowledge of the non-being, he does not do so in the framework which Geiger's research might suggest. Is Gilson's reference to existence as intelligible but not conceptualizable what Maritain means by intuition?

Despite the hopes of the reader that Gilson might have been more explicit in regard to certain modern controversies regarding our knowledge of being—perhaps it is only a case of asking him to explicate what cannot be conceptualized—the chapter on our knowledge of existence remains one of the original contributions which this book makes to the *philosophia perennis*. The core of the chapter is that judgments of existence cannot be reduced to judgments of attribution. Gilson will not accept the proposition *A is* as simply meaning *A is A*. With an insight that does justice to both common sense and scientific principle, Gilson shows that in affirming or denying existence, as in the judgment, *Peter is* (or *exists*), the verb is not simply the logical copula but has a meaning by itself. Existence is not an accident qualifying an essence in the real world, and in the existential judgment, it is not a predicate modifying a subject. The problem is com-

plicated by the ambiguous character of the word " is " which can inhabit either the logical or ontological universe of discourse. But unlike contemporary purists, Gilson does not repudiate common sense because it is sometimes vague and even ambiguous. He wishes to probe it for its latent metaphysics, purifying it when necessary and accepting it when it is true.

Gilson's final chapter is entitled " Existence and Philosophy." Here, while appealing to philosophy to recognize the rights of existence, he also asks it to stop at the ultimate and, in spite of the torment to conceptualize, to refrain from the attempt to deduce the ultimate from something even more ultimate which is beyond being. There are also admonitions against the so-called " copy " theory of truth which turns the mind into a mirror rather than accepts it as a vital agent in the cognitive process.

This book, when its full meaning is thought through and when it has been read and reread with the attention it invites, may well be judged as a high-water mark in the twentieth century rise of Scholasticism. Like every great book, if thinkers are only attentive to it, it will have its commentators and even its commentaries. When a heavy hammer strikes the anvil, there are sparks in many directions. For instance, the historical arrows in the book should be followed down to contemporary conceptualism and the emphasis on logic. The whole problem of mechanism could be treated in the light of what Gilson has said on essentialism. The problem of our knowledge of existence should be clarified even if not conceptualized. Gilson's thesis should be applied to the conflict of voluntarism versus intellectualism in the history of thought and on the contemporary scene. The problem of the intelligibility of creatures in affording knowledge of God can be further probed. The problem of the analogy of being can be pointed up in Gilson's framework and applied to the history of thought as Gilson has applied the doctrine on existence.

This book should be of interest to all philosophers. It is " must " reading for the Scholastic. For Gilson is not only a good chronicler of the past; his genius is also as a teacher for the present.

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Religious Trends in English Poetry. Volume III: *1780-1830: Romantic Faith.* By HOXIE NEALE FAIRCHILD. New York: Columbia University Press, 1949. Pp. 559, with index. $6.75.

Professor Fairchild leaves us in no doubt about his attitude toward romanticism. He sees that at its best and in spite of its early contributions to man's happiness, it is self-worship; at its worst it is a selfish pride and a lust for power, " the same force which actuates the foes of democracy."

This third volume of *Religious Trends in English Poetry*, then, is more than a careful piece of scholarship about the religious beliefs of the great nineteenth century poets; it has a value which comes from Professor Fairchild's knowledge of the possibility of an exaggeration at the present moment of the romantic philosophy of life, a philosophy which the Romantic Movement in literature represents at the culmination of one point of its development.

This work belongs to a series of five volumes which proposes to trace "the trends of religious thought and feeling through English poetry from the beginning of the eighteenth century to the present." In the preface the author points out that the scope and method of the present volume differ markedly from the plan of the two earlier books, for instead of examining the work of a great number of second and third (or lower) rate writers, here he limits himself to a detailed investigation of seven distinguished poets of the Romantic period: Burns, Blake, Wordsworth, Coleridge, Shelley, Byron, and Keats. This change will, no doubt, ease many of Professor Fairchild's readers who have found that volumes I and II required weary plodding through much dull and uninteresting verse.

By means of a religious frame of reference, the author analyzes romanticism as exhibited in its most well-known exponents. He justifies his position by numerous definitions of romanticism, all of which emphasize faith in human energy and in human ability as opposed to whatever may tend in the environment and ideology of the age to check or limit it. To escape from a society dominated by industrial, economic, and scientific interests, the Romantic writers formulate a divinity of some sort—Nature, Love, or Beauty—and give it certain supernatural attributes. Professor Fairchild frankly states that such a romantic God is far from being the Christian God since to the romantic there is no essential difference of kind between himself and his ideal, rather a distinction of degree. Professor Fairchild, therefore, refuses to call such a religion "Christianity," reserving for it the term "romantic religion." He has traced the earlier appearance and development of this belief in his two previous volumes, and it is this thesis of the continuity of religious thought which unifies the series. He has shown the line of advance to be a growth of self-trust encouraged by the Protestant psychology, which developed as Protestantism decayed into a sentimental deism that interfused God, man, and nature in a system of universal benevolence. With the industrial and social changes of the nineteenth century a romantic deity was created that transcended humanity—since mechanism threatened to engulf human independence—but by no means was the Christian God. Every Christian who takes his religion seriously should be grateful to Professor Fairchild for his honest and firm stand on the essential distinction between a belief which says, "No law can be sacred to me but that of my own nature," and one which says, "Be

it done unto me according to thy word." The kind of criticism which confuses these two attitudes so diametrically opposed is well-known to Professor Fairchild and it is against any such misconception that he takes his position determinedly.

Professor Fairchild traces in the text the development of religious thought of each of the seven poets through various stages of his career and uses his writings as illustration and explanation. As the author proceeds he shows how the romantic belief in man's essential goodness and in his self-sufficiency is responsible in large part for the best qualities in the work of these poets; is responsible for their enthusiasm, their intensity of joy and sorrow, for their ideals of love, brotherhood, and nature; how, for example, Byron's romantic desire for complete personal freedom led to his advocacy of general social and political liberty as expressed in *Childe Harold* and *The Prisoner of Chillon*—works which influenced the development of political thought in Europe. However, since this romantic faith was built primarily on personal feeling; since it promised "the higher spiritual values without paying the stiff price exacted by Christianity: discipline, humility, self-surrender, awareness of sin, penitence and penance, the way of the Cross," it lacked objectivity and firmness and so gradually weakened and failed. Professor Fairchild, moreover, does not fail to note that its urge towards infinite expansiveness is responsible for much that is vague and overstrained in the work of the romantics, and that their art suffers because their belief forced upon them the position of teacher and prophet.

The detailed investigation presented in this volume sometimes makes tedious reading and sometimes gives one a feeling of sadness and futility, so invariably yet necessarily does the author note how each of the poets of this period failed either to attain or to maintain full maturity of development. He leaves one with the thought of Wordsworth's and Coleridge's loss of vision, of Burns' judgment of himself, "I have been a fool all my life," of Blake's self-deification—"Thine own humanity learn to adore"—of the self-centeredness of Shelley, Keats, and Byron. At their best these men show deep spirituality and rich inspiration, but Professor Fairchild remorselessly lays bare their subjectivity and self-interest which made them worshippers of their very weaknesses.

A final footnote (page 553) referring to "the larger branch of the Catholic Church" as failing to distinguish "between the order which oppresses and the order which liberates" struck a jarring note and did not seem necessary in defining Professor Fairchild's position. This is the only adverse comment, for the work is a serious study, carefully presented, and stimulating to the reader interested in the religious background of thought from which romanticism developed.

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You Can Change the World. By JAMES KELLER. New York: Longmans, Green, 1948. Pp. 387. $3.00.

Catholic Social Action. By JOHN F. CRONIN, Ph.D. Milwaukee: Bruce, 1948. Pp. 265 with index. $3.50.

The very title of Fr. Keller's book has a ringing sound, an optimistic note, and a vigorous challenge. In content, the book has all the enthusiasm of a great crusade. The author is the founder of the Christopher Movement and this volume constitutes the definitive handbook for his followers. Although the purpose of the Christophers is the Christianization of society, the movement cannot be considered as Catholic. This fact is evidently in the book. The Maryknoll priest omits any mention of the central Catholic doctrine of the Trinity and of the role of Mary in Christian life. This he obviously does in order not to lose any non-Catholics who might find Catholic teaching too much to swallow in one gulp, but who are, nevertheless, anxious for a high natural code of ethics in society.

It is Fr. Keller's contention that only one percent of the American people are working to undermine our national security. Not all are Communists, he is quick to add. Against this militant minority, Fr. Keller thinks that only one percent of the decent element in our country is needed to safeguard our way of life. The author offers no new organization. He completely places his confidence in personal initiative. Thus against an organized force of the wicked minded, Fr. Keller pits an unorganized and sporadic crusade of good people. This would be most unrealistic except for the fact that actually Fr. Keller is making an appeal for leaders. True, the Christophers as such are not organized, but if from the enthusiasm that this book and other works of the founder arouse they really hold their ground and if they do not die out after the first burst of energy, then some lasting results may accrue.

Fr. Keller states the purpose of his undertaking as follows: "It is the Christopher thesis, therefore, that for the one percent bent on destruction, it should not be too difficult to find another one percent who will strive with even greater imagination and enterprise to show a devoted and continuing solicitude for our brothers of the one hundred million who are reached by no faith." (p. 27) The central theme of Fr. Keller's book is the need for personal responsibility in all phases of life: domestic, social, even global. Fourteen chapters are dedicated to the "how" of changing the world in such fields as education, government, labor, and so through the list. The best is the one on woman's duties in the chapter entitled "Influencing from the Home." By the use of numerous and interesting anecdotes the author gives a degree of credibility to the lofty objectives he has in mind and at the same time stirs the reader to a desire for personal action.

The general impression that remains after one has read Fr. Keller's book is that the goals he envisages are not too difficult of attainment. At times he drops hints and gives indication that genuine hard work and sacrifice are needed. However, since he mentions all the victories and none of the setbacks of individual Christophers, a very one-sided and rosy point of view is given. Also the fact that the author has no concrete plans for reform makes one wonder whether he is interested in changing the world or simply of holding on to the one we have minus the more obnoxious elements, especially the Communists. True, Fr. Keller speaks frequently of bringing Christ into the market place, but he always proceeds on the generalization that " most American people are decent-minded and decent living." (p. 148) If the American people measure up to the high standards that Fr. Keller implies they have, the United States will be a land of saints and scholars by the turn of the century.

The author's constant repetition of the need for action is at least in harmony with recent papal pronouncements. The Holy Father has insisted that now is the time for action. However, it is not likely that mere activity with no doctrinal content to support and direct this action is what was intended. In the author's program for the Catholic's day (p. 314) he allows eight minutes as sufficient time for self-indoctrination. He doesn't rule out more extensive study, it is true, but being human, people will be most satisfied with the minimum since it meets their leader's approval. We would like to share Fr. Keller's optimistic outlook on the future if only one percent of the good people get to work on changing the world. In fact we should like to find the spot from which he views the national scene.

Perhaps the best place for this clarion call to action would be in hands of high school graduates. Undoubtedly the author's words will fire them with enthusiasm and the modern youth could well use the grand ideals that this zealous priest proposes. The Christopher Movement is but one of many groups trying to rescue the world from its present chaotic state. Even if it only is a short-lived affair it may do enough good and inspire enough Americans to wake up and take some interest in their national security. Certainly it would not do for the " holier than thou " school of thought to sit in condemnatory judgment on this effort of Fr. Keller. He could, with justice, merely point out that after they had passed their judgment, they were still sitting.

Fr. Cronin in his book *Catholic Social Action* lists the Christophers under the heading of " Training for Leaders." He considers them as a Catholic movement, but his book was written before Fr. Keller's. Those in the Christopher Movement, that is, the Catholic element, who find the unorganized life of that group more of a handicap than a help, can turn to Fr. Cronin's work with much profit. The author has compiled a list of just about every Catholic organization in America working in the field of social action.

Catholic Social Action, says Fr. Cronin, " seeks to promote the common good by consistent and coherent programs of general betterment in the socioeconomic field." (p. 65) The author has very conveniently divided his book into three parts that make for a quick and clear view of the whole field that he covers. Part I is entitled "Education for Social Action." The program here begins with the grammar school and extends to adult training. Special consideration in this section, and in fact throughout the book, is given to the role of the priest. Part II treats of social action with workers and employers. It includes useful observations and remarks on labor legislation as well as union activities. The last part is called " Social Action and Community Groups." Under this heading are discussed the rural question, the problem of tolerance, Catholic Organizations, and finally " Sources of Information." In a postscript, Fr. Cronin states the goal of Catholic Action and explains what is meant by the Industry Council Plan. There also are three appendices. The first contains an exhaustive and extremely valuable as well as intelligently prepared reading list. The second gives the names and addresses of those conducting Diocesan Social Education projects. Finally, there is the forceful statement of Archbishop John Ireland on the Negro's position in American life.

Catholic Social Action is not to be confused with Catholic Action. Fr. Cronin does not develop their relationship to any extent, but he does mention that Catholic Action is of interest to the student of social action since it can aid the latter in his own field. Because Fr. Cronin promises another book, to be called *Catholic Social Principles*, we can let the problem of the interrelation of these two movements wait for a future treatment. To the Thomist, it must come as a surprise that Fr. Cronin first should write a book on social action and project one on social principles for a later date. It is not merely a question of putting the cart before the horse, it is leaving the cart altogether without the horse. However, the inversion of order is justified from the fact that the present book is more of a survey on the present condition of Catholic social action in America than any dogmatic statement on what it should be or how it ought to operate.

Catholic Social Action can be recommended without hesitation. It is written in a calm and pleasing style. Whereas Fr. Keller's book has a dash of the popular orator, Fr. Cronin is the gentle professorial type conveying his information without passion or excitement. Fr. Keller's work emphasizes the need of the individual doing something about improving society. Dr. Cronin's main point is that the organizations we now have must be properly motivated and directed to the common good. Both priests accept society as they find it and propose to work upon it and not to try to tear the whole structure down and begin building from the ground up. Neither, of course, delays to defend this thesis since both are pre-

eminently in the practical order and not concerned with theoretical problems. Each book might have put more emphasis on the need of personal sanctification. Both writers mention the point, but Fr. Keller appears to rest too much on the natural good in each person as sufficient to carry the world to a better state of existence. Thus his book becomes but a partial commentary on the statement attributed to Pius X: "I have a plan to reform the world. Let each man reform himself." On the other hand, Dr. Cronin gives so much importance to the role of organization that he seems to put his trust for a better society in an impersonal structure of giant bureaus all gracefully cooperating for the welfare of the common good.

Fortunately both authors do not consider their particular parts in the reform of society as exclusive. Neither writer snipes at other groups working for the inculcation of Christian principles into modern life. Fr. Cronin neatly puts his position: "Social action is but one phase of the master plan of restoring all things in Christ. . . . It is a part of the effort to approach the order of things as conceived in the mind of God, and expressed through reason and revelation." (p. 200)

If some Catholics have become impatient with the Church's apparent apathy, as seen in Her members, to the present wretched state of society and should begin to wonder if She will ever do anything, it should be remembered that the Church is quietly and effectively working for a new and better world. One is reminded of the Gospel incident of St. John the Baptist. (Matthew 11, 1-6) The Precursor of Christ was in prison and sent some of his disciples to ask Our Lord if He was the One to come or should they look for another. No doubt, St. John expected a great spiritual revolution, a spectacular return of the Jewish people to the love of God once the Messias manifested Himself. Instead, John was in prison and the expected victory was not in sight. Nevertheless Christ did lay the foundations for a better world and within a few centuries the Roman Empire became a Christian Empire.

Today there is needed the same zeal that filled the souls of the first apostles. The little victories of the social reformers, the ready guidance of the theologians, together with the lives and prayers of the million who faithfully fulfill their vocations to the best of their ability are making possible a better world for the future. Although the urgency of Leo XIII's social message, in spite of its vigorous repetition and extension by the three succeeding Piuses, has not been fully appreciated, one must remember that social revolutions look dramatic only in retrospect. In themselves they are slow, almost tedious processes, and attain their effectiveness more from concerted effort than by sweeping victories.

Gradually the Church's doctrine on the social question is penetrating the minds of all peoples. The root of delay in its complete application seems to be that thus far the social movement has been characterized by the

unguided zeal of the reformer and the unfortunate failure of the theologian to bring his speculative principles into the market place. Even at this late date, the full moral import of the just wage and the strike, for example, are but hazy notions in the minds of both capital and labor. The demands of both sides are concrete, but the meaning of the issues are still vague. Until this gap is bridged, the social movement will suffer setbacks. Perhaps Fr. Cronin's projected book on Social Action Principles will have the answer. Neither of these books has.

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Personality in Nature, Society, and Culture. Edited by CLYDE KLUCKHOHN and HENRY MURRAY. New York: Knopf, 1948. Pp. 582, with index. $4.50.

This book is a collection of forty papers, most of them published previously in various periodicals and repinted here with some slight alterations or abbreviations. Thus, the presentation of the subject matter differs from that employed in larger works to which many authors contribute. In these treatises, each contributor deals with a definite part or aspect of the whole matter; however, no problem is discussed in its totality. Yet, many issues are brought up; many particular problems are dealt with in a searching manner; and, the relation of each of these with the whole is made clear by the brief systematic exposition of the editors and by short introductions preceding each of the sections of the book as well as each article. This procedure has its definite didactic advantages. It places the reader in the midst of the matter and lets him see to better advantage than in a textbook, how the various studies concerned with the problem of personality approach their tasks. Though there is a basic agreement among the authors as to the nature of the problems and the principles of methodology, there is also a great variety of individual standpoints, so that—again otherwise than in a textbook—the reader does not conceive of the matter as a rigid and final mass of information. Rather, he realizes how many questions are still unanswered, whether regarding facts or interpretation.

The early part of the book is a concise formulation of some fundamental concepts by the two editors: Dr. Kluckhohn, a professor of anthropology, and Dr. Murray, until recently head of the psychological clinic of Harvard University. This section on the "Conception of Personality" furnishes, together with the opening consideration of part two: "The Determinants of Personality Formation," by the same authors, the conceptual framework for the whole work.

Personality is stated to be "an actual, concrete organization of the processes with which the psychologist is concerned"; as such, it must be located "within some field where there is a togetherness of all these processes or of representations of all these processes." Personality refers to the functioning of the individual as a whole; hence, it is to be located in the "highest or regnant level of control," i. e., the brain. Personality, further, is the "organization of all the integrative processes in the brain"; considered historically, it is the "entire sequence of organized governmental processes in the brain from birth to death." Personality has several functions: tension reduction, self expression, reduction of conflicts by scheduling (following social conventions, schedules of organizations which together with the disposition to conform, the program of a man's own prospective actions systems, and many other factors, determine the actual order of events), reduction of conflicts by social conformity and identification. Generally speaking, personality "operates to reduce 'dissatisfaction' and extend 'satisfaction.'"

Question may be raised why all this has to be referred to brain processes, the nature of which is so unknown as to make the reference of hardly any explanatory value. Also, it appears difficult to conceive of "self-expression" in terms of brain processes. Actually, this terminology is superfluous; all the things which these two authors say and what the other contributors report can be stated without any reference to the brain. This is important to note; the further studies are independent of this particular terminology and may, therefore, be considered in themselves.

Not even the two editors make further use of their explanation. The interesting analysis of the determinants of personality formation proceeds without appealing to the brain. "Every man is like all other men, like some other men, like no other man." His personality is determined by constitutional factors or biological events like age, sex, and inborn characteristics. "The old problem of 'heredity *or* environment' is essentially meaningless," since once environment has begun to operate, it is no longer possible to disentangle their influences. A second group of determinants originates in group membership. It is possible that impersonal environment (climate, terrain, etc.) exercises influence; but we know hardly anything of these factors. Thirdly, there are "rôle determinants," the formative power of the station and function allotted to the individual by his culture and community. Fourthly, "situational determinants," accidental events, chance contacts, and others. All these determinants are interdependent.

There are some other notions which may be considered as fundamental. One of these is that of the various "levels" within the human being. The human being is conceived as a unity of such levels; the differentiation in mind and body is rejected, and therefore also the "psychosomatic" interpretation of many problems, like that of self-control, freedom of the will,

autonomic illness. These are " problems of regnant-subregnant relations . . . ; they depend on the sovereignity or adjustability of directive processes at the highest integrative level."

Another approach, common to almost all the contributors, is that of Freudian psychoanalysis. It is, however, noteworthy that this doctrine is used partly with great reservations, partly after having been subjected to far reaching modifications; some of the latter, indeed, leave little of the original doctrine unchanged. It is, particularly, the fact that cultural anthropologists have not been able to confirm Freud's views on the generality of his " mechanisms," e. g., of the " Oedipus-situation," which has made such modifications necessary. In many instances, the reader feels that the use of the psychoanalytic terminology is more an expression of respect for current ideas and for the achievement of Freud, than anything indispensable for the presentation of facts or the formulation of theories.

Corresponding with the frame of reference above indicated, the second part is divided into sections dealing with: Constitutional determinants; Interrelations between Constitutional and Group Membership Determinants; Group Membership; Rôle; Situational Determinants; and, Interrelations between the Determinants. The third part discusses some applications to modern problems.

It is, obviously, impossible to summarize so large a number of contributions. A few remarks with respect to some particularly interesting details must suffice. The student of sociology, and the educator as well, will learn much from several studies on the influences determining the behavior of children and adolescents. There are, furthermore, valuable statements on the race problem in the United States. In this respect, an article in the third part: " The Channelling of Negro Aggression by the Cultural Process," is deserving of attention. Related topics are discussed in " Age and Sex in the Social Structure of the United States," by Parsons, and in " Bureaucratic Structure and Personality," by R. K. Merton. The study by Gordon Allport, J. S. Brunner, and E. M. Jandorf: " Personality under Social Catastrophe: Ninety Life-Histories of the Nazi Revolution," is of definite value; the observations made under these special conditions allow for generalization and understanding of human behavior under great stress of long duration.

Dr. A. M. Tozzer writes on " Biography and Biology." This essay is not only well written and amusing, but is noteworthy in showing the weakness of the idea which attributes individual traits to others " running in the family." From Dr. Tozzer's treatment it can be gathered how much more individual experience fashions a person than does his ancestry.

On the whole, the evidence presented in these studies speaks strongly in favor of environmental influences. With few exceptions, it would seem, the inborn nature of an individual allows for highly different developments

which depend mainly on the culture in which the individual grows up and on the way in which this cultural influence is brought to bear on the individual.

Certain problems could have been treated to a far greater extent. Particularly, there is little on the rôle of ideational aspects in cultures. They are, indeed, implied in the general concept of culture. They are also pointed out more in detail in one or the other article, as in E. H. Erikson's "Hitler's Imagery and German Youth." There are references to such questions when some authors discuss the sentiment of guilt which may attach itself to different forms of behavior in different cultures or which may be absent altogether. Nonetheless, there is not sufficient appreciation of the power ideas may exercise.

A reader acquainted with the problems and the work of the cultural anthropologists, psychologists, psychiatrists, and students of sociology will find not too much that is new to him; understandably, since the articles are reprinted. What is rather new is the systematic ordering of the vast mass of evidence within a clear frame of reference. Whether the latter will withstand criticism is, for the present, of secondary importance. The mere fact that it allows a logical arrangement is a notable asset. The student who approaches the set of problems for the first time will profit much by careful reading; for anyone interested in human affairs the book will be helpful. It must again be emphasized that the presentation gains by the brief but instructive introductions prefacing each section, by which widely different material is gathered into a coherent text.

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The Life of Science. By GEORGE SARTON. New York: Henry Schuman, 1948. Pp. 186. $3.00.

Dr. Sarton's book is the keynote book in the "Life of Science Library" being published at the present time by H. Schuman, Inc. In the words of the publishers, since "science can be rightly called 'the domain of reason,' a knowledge of its history is central to any effort to understand our civilization." It is with this idea in mind that they are publishing a series of books dealing with the historical aspects of the natural sciences, written in non-technical language, and intended both for the general reader and specialist.

With regard to the scope of the book, Dr. Sarton feels that far too little emphasis has been placed on the history of science. One can not really understand the nature of science unless he knows something about the fundamental discoveries in the field and in related fields. The truly educated

man must know something about the life of science, just as he knows the life of art and the life of religion. As a goal, truth is sought, and even more, justice and charity. The book comprises a series of essays published at various times during the past thirty years by Dr. Sarton. They have been collected and edited for the most part by Frances Davis Cohen and I. Bernard Cohen. The essays are grouped under four headings: a) The Spread of Understanding, b) Secret History, c) East and West, d) Casting Bread Upon the Waters.

" The Spread of Understanding," a group of three essays, first explains the difficulty of acceptance by peoples of even the most elementary of discoveries, e. g. numerals, decimal system, mainly because of inborn prejudices. The second essay, " Medicine versus Art," stresses the author's idea of the necessity of art for the understanding of science. In Dr. Sarton's words, " science is the reason, art the joy, religion the harmony, of life " (p. 28). The third essay establishes Dr. Sarton's idea of the true purpose of the history of science: " to establish the genesis and the development of scientific facts and ideas, taking into account all intellectual exchanges and all influences brought into play by the very progress of civilization. It is indeed a history of human civilization, considered from its highest point of view. The center of interest is the evolution of science, but general history remains always in the background " (p. 33). It is in this essay that he treats of the departments of life most interesting to the historian of science: histories of civilization, of technology, of religions, of fine arts and crafts.

" Secret History " gains its title from the fact that intellectual history, largely a history of individuals, is comparatively unknown, whereas political history has up to the present claimed the major attention of historians. Four individuals have been singled out to prove the author's main point, namely: peoples and nations are to be judged by their imperishable contributions to the whole of humanity, not by the power of wealth they have attained (p. 64). Biographies included by the editors in this section are those of Leonardo da Vinci, Galois, Renan, and Herbert Spencer.

" East and West in the History of Science " is a single essay dealing with the mutual interdependence of eastern and western cultures.

" Casting Bread Upon the Waters " contains two essays, the first expressing Dr. Sarton's plea both for continuity in historical research and for an institute established at a great university in order that the work may be continued and indefinitely perfected. The second essay in this section, with the same title as the section, expresses his heartfelt desire that more and more people should appreciate what may be done in this world through better understanding gained through a knowledge of the life of science.

With regard to an evaluation of the work: " The Life of Science " is

first of all intended both for the general reader and the specialist. If Dr. Sarton's book is to be taken as the standard of the series for general interest and ease of reading, then the other authors have a difficult task ahead of them. All four sections are eminently enjoyable and carry out the author's idea of grounding a person on the fundamentals of the history of science. The biographies are most interesting from the biographical viewpoint but it is regrettable that the other men included are not of the same caliber as da Vinci. Renan's life, for example, is interesting, but whether his place is justified beside Leonardo da Vinci is certainly open to question.

Dr. Sarton's idea of philosophy restricts him to conclusions drawn from sensible experience. With regard to the necessity of drawing conclusions from sensible experience he is absolutely correct, but he fails to see that through these conclusions he is able to rise to a higher degree of abstraction. He of course asserts, and rightly so, that the triumphs of modern science are due to the application of the experimental method (p. 160). Yet we know that experimental science as such can not uncover the absolutely fundamental nature of things; a higher science is needed and that is the reason why philosophy is defined as the " scientific knowledge of all things, gained through consideration by the natural light of reason, of their fundamental reasons or causes." (Phillips, *Modern Thomistic Philosophy*, Vol. I, p. 19)

With regard to truth, Dr. Sarton states that it is relative but becomes less and less so, and more and more reliable in proportion as it is checked oftener and in a greater variety of ways (pp. 161, 162). While he deprecates the many distinctions of the Scholastics (cf. p. 184) it would seem that the Scholastic distinction of ontological truth (the truth of things) and logical truth (truth proper to the mind) conforms to his ideas and explain his meaning in a far more understandable way (cf. pp. 43, 161, 162).

For Dr. Sarton, our real goal is more distant than truth, for truth and justice are not sufficient; charity is needed (p. 183). It is interesting in this regard to note that Dr. Sarton states that the true scientist is a lay priest, consecrated to the quest of truth (p. 115). Truth according to the Thomist view is also sought for its own sake, it is an end or aim, but by searching after truth we are able to gain an insight into the things of God. Dr. Sarton, while stating that charity is our ultimate goal, would not go this far; for him a religious scientist is one who takes life earnestly and forgets himself (p. 115). Yet, we too speak of scientists as being in a sense priests of nature because true scientists have the particular task of gaining what knowledge they can about material nature as such, as an untouched work of God, and of offering that knowledge back to God. We know that there is no such thing as a Catholic, Protestant, or Jewish science but there are catholic scientists and there is a catholic setting for science;

the idea expressed by Dr. Sarton is placed on a much higher level if we do recall, the more often the better, that scientists are "priests of nature" not only because they continually seek after truth but because they offer their results back to God Who is the Author of all truth!

It should be noted that Dr. Sarton in quite a number of places makes quite unfavorable statements concerning Scholastic philosophy (cf. pp. 14, 51, 55, 77, 79, 160, 184) and either explicitly or implicitly the role of the Church in science (cf. pp. 8, 38, 69, 76, 80, 110, 114, 164, 184). Yet in all of these cases, it is the opinion of the reviewer that the statements are due, not to deliberate disregard of facts, but rather to the conditions of liberal tradition under which the essays were written. Dr. Sarton has only to apply his own principles of studying truth which becomes more and more reliable as it is checked oftener and in a greater variety of ways (p. 161).

Despite the above objections, Dr. Sarton's thesis emphasizing the tremendous need for a knowledge of the history of science in order to understand the nature of science is beautifully and persuasively developed.

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BRIEF NOTICES

Basic Writings of Saint Augustine. Edited by WHITNEY J. OATES. New York: Random House, 1948. Vol. I, pp. 887; vol. II, pp. 898. Price $10.00.

Volume I of this work contains the following treatises, each complete: *The Confessions, Soliloquies, On The Immortality Of The Soul, On The Morals Of The Catholic Church, Concerning The Teacher, On The Profit Of Believing, Concerning The Nature Of The Good, On The Spirit And The Letter, On Nature And Grace, On The Grace of Christ And On Original Sin, The Enchiridion, On Grace And Free Will, On The Predestination Of The Saints.* Volume II contains *The City of God* (Books I, II 14, 21, IV 2, 4, V, VI 5, VII 6, VIII, IX 15, X 2, XI, XII, XIII, XIV, XV, XVI, XVII, XVIII, XIX, XX, XXI, XXII), and *On The Trinity* (Books I, II, IV, VI, VIII, IX, XII, XV).

In addition there is a "Preface" and a lengthy "Introduction" by the editor. At the end of volume one, in the form of an appendix, is a fourteen page analysis of *On Free Will* in lieu of the treatise itself, and an index to *The Confessions* only. At the end of volume two are two subject indices: one to *The City of God* and one to *On The Trinity.* The editor has also prefaced each treatise by a brief introductory note. The translations found here are all from a *Select Library of the Nicene and Post-Nicene Fathers of the Christian Church* (edited by Philip Schaff) except *On The Immortality of The Soul,* and *Concerning The Teacher* in which cases the Leckie translations were used. The *Nicene and Post-Nicene* translations "have been checked against the original Latin and have been modified in certain respects either to make the version in question more accurate or to modernize the translations where this seemed to be desirable. The notes which appear in Dr. Schaff's edition, which contain references to the Bible and the Apocrypha, have been reproduced in their entirety. A selection has been made from the remaining notes in order that the reader may have the necessary information in order to understand any passage which might otherwise be obscure. A small number of other notes has been added [by the editor] with the same purpose in view" (vol. 1, p. V).

The established pattern for reviewing monumental works of this kind is to quarrel first with the selections made, and second with the editor's "Introduction." I am chagrined to find that I have no quarrel at all—only pure enthusiasm. These selections are as representative of the thought of Augustine as anything short of his complete works can be. There are two slight reservations in that last sentence: first, the omission of parts of

any great work (*The City of God* and *On The Trinity*) is always painful, no matter how compelling the practical reasons necessitating it; second, if *On Free Will* is in certain passages too "prolix" (vol. 1, p. 835) to be included, I am not sure that any useful purpose is served by the chapter by chapter analysis presented here (vol. 1, pp. 821-834). But even if one does not antecedently approve these exact selections, he may find Prof. Oates' justification of them (vol. 1, pp. XXXVI-XXXVIII) persuasive. As for the "Introduction," it is admirably informed, and intellectually stimulating.

At the present moment, happily, two new series of translations of the Fathers, including St. Augustine, are under way in America. More advanced students will no doubt wish to have the most recent translations. But for a very large number of formal and informal students these volumes will, for years, be their Augustine. This great work is a fitting companion to the same publishers *The Dialogues of Plato* (Jowett), *The Stoic and Epicurean Philosophers* (Oates), *The Basic Works of Aristotle* (McKeon), and *The Basic Writings of St. Thomas Aquinas* (Pegis).

An Introduction to Aesthetics. By E. F. Carritt. London: Hutchinson's University Library, 1949. Pp. 151. 7/6.

This elliptical approach to a discussion and a delimiting of esthetics is remarkable for its humility (at times a mere habitual tentativeness) and lack of stuffiness. Mr. Carritt is concerned with achieving a workable, "non-esthetic" (and, it would appear, extra-philosophical) answer to why the thing being seen should please. He would not consider the beauty of an object as convertible with its being—prescinding from moral beauty, that is, and speaking only of esthetic satisfaction. Although the author comes to define esthetic experience as "the expression of an emotion in an individual mind" and again as "sympathetic contemplation," in Wordsworth's tranquil sense of life's delights and tragedies, he does not deny (indeed he is rather insistent upon) moral significance. Esthetic significance is to him not a greater thing, but simply, and somewhat vaguely, other. One of the most interesting aspects of this little handbook is its inclusion of two chapters entitled "self-criticism." In these the author asks and answers with elaborate precisions such questions as the following: Why am I partially blind to El Greco? Why do I prefer Arnold as poet to Tennyson or Browning? Mr. Carritt has succeeded in arming his readers rather handsomely against the pretensions of the *art pour l'art* school and against those who confuse the satisfactions of accepted propaganda with experience truly esthetic. But he has scarcely come to grips with the fundamental obligations of definition and *rationale*; satisfaction in these matters is a reasonable expectation for a book designed to be introductory and directive.

The Great Books. A Christian Appraisal. Edited with an introduction by Harold C. Gardiner, S. J. New York: The Devin-Adair Company, 1949. Pp. 112. $2.00.

For three years more the Great Books Foundation will engage in discussions, the country over, of the "Great Books." To assist in the interpretation of the seventeen books, or fragments of books as they are in some instances, chosen for this first year's program, the literary editor of *America* has selected a like number of critical articles. The need for such an appraisal is obvious enough, perhaps doubly so when one considers, in the words of the editor, that a book "will have been great if it has changed man's thinking, whether for good or evil." Perhaps the emphasis on the channeling of thought accounts for the appearance of such "books" on the first list as the Declaration of Independence and the Communist Manifesto. For others "changed" is hardly the operative word; how, for example, has *Hamlet* changed (rather than confirmed) man's thinking? Actually, what the Foundation is about is an isolation of "great thoughts" —an approach which apparently makes possible the taking of the first half of St. Augustine's *Confessions* in the first year of study, and the second in the fourth year.

Neither the editor nor his contributors can be held accountable, of course, for the selection of books to be appraised; in fact, they find themselves somewhat embattled. As Father Walter Farrell, O. P., aware of the absurdity of treating St. Thomas on law under this head, says: "It is not a Great Book; it is a fragment smack out of a very great book." Another contributor finds *The Prince* worth considering for "the greatness of its error." Again, Locke's *Two Treatises of Civil Government* is "worth reading more as a test of one's knowledge of political philosophy than as a piece of instruction." Of Rousseau, Louis J. A. Mercier writes: "He should then be studied as a witness to the disintegration of Western thought in his own age, and as a contributor to its even greater disintegration in ours."

Still, the study of the greater number of these works may be undertaken for the reason St. Basil gives for the study of the ancients: for the supporting truths they contain and as preparation for the direct light of sacred and mystical wisdom. Such is the spirit of the analysis in this first volume of Great Book appraisals. Frank Sheed's characteristically vigorous and penetrating essay on St. Augustine and Deitrich von Hildebrand's short but stimulating paper on the *Ethics* are not only cogent analyses, as almost all of these essays are, but viable as independent pieces. Father Gardiner's introduction strikes the right note in its careful discusison of the *Index* and in calling for the reader's exercise of "intellectual humility" before books which must be criticized severely, for "even the greatest achievements of the human mind are always and invariably reminders of human frailty and

inadequacy." This and the three volumes of appraisal to follow will be indispensable for those who are taking the Great Books course and of almost equal value to those who come upon the great vehicles of thought through undirected study.

The Road To Reason. By Lecomte du Noüy. Translated and edited by Mary Lecomte du Noüy. New York: Longmans, Green and Co., 1948. Pp. 254. $3.50.

This book, translated a year after Dr. du Noüy's death, was written seven years before his *Human Destiny.* It is prefaced by a glowing personal tribute by Dr. Ralph W. G. Wyckoff. It is a courageous attempt on the part of a prominent scientist to discuss certain philosophical and cultural problems arising out of science, such as the objectives and methods of science, the interpretation of scientific data, the epistemological value of scientific knowledge, the necessity of extra-scientific knowledge, e. g., morals, for the preservation of cultural values.

One must acknowledge reluctantly that Dr. du Noüy is not philosophically equipped for his generously undertaken task. His philosophical vision does not extend beyond Descartes, Pascal, Kant, and Bergson with a resultant blend of scientific erudition and philosophical naivete. For example, the representation theory of knowledge, quietly embalmed by Aristotle, is adopted very seriously (p. 25); and the view of the nature of the scientific knowledge of phenomena is narrowly Kantian (p. 37; pp. 70-71; p. 94). The principle of causality which " we have to admit blindly " (p. 41) turns out to be merely Humian " precedence " (p. 72). Kant's third antinomy is summarized as the perfect formulation of Dr. du Noüy's view of causality (p. 73). In a positivistic spirit, possibility and impossibility are dismissed as meaningless except in terms of maximal and minimal statistical probability (p. 116). But perhaps philosophical simplicity reaches its climax with the sentence: " From a philosophical point of view only two truths therefore can classically exist: revealed, divine truth, which is by definition absolute and unverifiable, and scientific truth, which is essentially human and relative " (p. 39).

Despite a few instances of trivialities not cited in this review, the book has some valuable insights. There is a statistical analysis of the probabilities of any form of evaluation and the postulation, as an alternative, of Eddington's " anti-chance " (pp. 120-156). Again, " to lean on it (i. e., on science) to create a negative metaphysics (denial of God, soul etc.) is simply an error of reasoning " (p. 233). And on the nature of man, " man is a whole . . . and his immense complexity results in the most fundamental unity of nature. He is subject to the laws of a world that he dominates by his thought " (p. 239). To preserve Western Civilization it is necessary " to

consider man, in his complexity, as a single problem and to cease separating instruction from moral education" (p. 240). The achievement of Dr. du Noüy's purpose would have required philosophical gifts of the same order as his unquestioned scientific gifts.

The Dehumanization of Art and Notes on the Novel. By Jose Ortega y Gasset. Princeton: Princeton University Press, 1948. Pp. 103. $2.00.

This little book marks the first appearance in English translation of two essays published in Spain in 1925. It says much for their author's prophetic powers and insight that they should appear *avant garde* today. Senor Ortega y Gasset holds that modern art is "by destiny" unpopular, that between the "new Muses" and the masses there is (and, it is hinted, should be) an impenetrable gulf. In its reversion from tradition, a *motif* essentially Western, modern art subscribes to the Porphyrian command, *Omne corpus fugiendum est.* Hence it depicts not man, but the "strangled victim" of its aesthetic triumph over human material. In the second essay the author celebrates the decline of the novel. Though its major vein has been exhausted, this form may yet "yield illustrious fruits" through the efforts of "minds of rare distinction." Characterizing the novel as a "sluggish form," Ortega sees in the "psychology of possible minds" the novel's remaining scope. This book of course reflects the larger accents of the author's thought and work and would be subject for its implications to a critique of the author's general theory; in its explications the work is for the student of artistic forms provocative and still timely.

The Great Tradition: the Democratic Idea. By Jerome G. Kerwin. New York: McMullen, 1948. Pp. 91. $1.50.

In these three lectures delivered in the annual Fenwick series at Holy Cross College, Worcester, there is presented a masterly discussion of the history and present position of the democratic idea. Necessarily confined by the number of the lectures, and by their printed appearance in so small a book as this, Kerwin has met all the challenges with outstanding success. It is impossible to recall any earlier treatment of the theme which has surmounted so many obstacles in such an effortless manner. Similarly, it is impossible to conceive of many theorists who could match the conciseness and accuracy of this approach, while maintaining—as does this author—complete freedom from pedantry.

The lectures were inaugurated by Holy Cross College as a special tribute to the memory of Bishop Benedict Joseph Fenwick, and they have, as an introductory note informs the reader, the purpose of presenting studies of contemporary society, made by scholars imbued with the tradition of

Christian principles. Professor Kerwin's study fits this description so admirably that the note might have been written with his work chiefly in mind. If all such series of lectures were to be served so well as this one has been in the present instance, surely generations of audiences, readers, and reviewers would be made immeasurably happier.

The three lectures are titled "The Development of the Democratic Idea," The Assault upon Democratic Dogma," and "The Practice of Democracy." They are of almost equal length, and each presents, in a style pleasantly well-informed, some historical analysis and some theoretical exposition of the ideas contained in each title. The first lecture traces the first appearance of the principle of responsible government in the classical pagan world to one of the latest expressions of this notion in the Pope's Christmas message of 1944. In this segment of the work, the breath-takingly rapid survey of this development is matched by the completeness and finish of the presentation. Few writers—or speakers—could hope to match Kerwin's achievement here.

In the third section, the author points to the truth, generally placidly ignored or violently repudiated by non-Catholics, that the Catholic is particularly well equipped to assist in the establishment and maintenance of a sound democratic system. Here Kerwin remarks that the priest's function as a shepherd of souls includes his duty to know and to dispense sound political information; extremes are admittedly bad, but by far the greater error, numerically, is committed by priests who know nothing of politics. Similar grievous defections from duties enjoined upon them by their profession are to be observed in Catholic educators. If these two powerful influences in American Catholic life were to become conscious of the necessity of giving sound instruction in political science, they would put "emphasis upon government as a great agent in the accomplishment of social good," and would thus "obliterate from young minds the idle and mischievous images of government as a mysterious and overpowering evil—an idea sedulously cultivated in American minds by people and groups who wish to lead their own lawless lives." The logical conclusion from the ideas mentioned in this lecture is simply stated by Kerwin: "Students should be encouraged to get into active public life."

But before they can take an intelligent part in political life, they must know something of the assaults which have been made upon democracy. For a provocative survey of the course of these attacks since the fourteenth century, and for an excellent guide to mature and extensive reading, few works could surpass the second section of this little book. Its coverage is remarkable, the soundness of its presentation is incontestable, the depth of scholarship displayed is phenomenal. Choosing the best lecture of these three would be a difficult task, since each has a different aim and approach, but, from the viewpoint of the political theorist, the twenty-five pages of the middle section are an invaluable review of newly juxtaposed materials.

The Holy Cross Press is to be congratulated upon its fitting presentation of these lectures; every aspect of the format is pleasing. An index would have been helpful, but the size of the book perhaps precluded an effort to make such a tool. The reader of Kerwin's book will be visually pleased, intellectually stimulated, and thoughtfully considerate of the author's warning that we must not ignore our responsibilities as the exemplar of Christian democracy.

Freedom of Information. By HERBERT BRUCKER. New York: The Macmillan Company, 1949. Pp. 307. $4.00.

What a prominent contemporary poet has called the Age of Anxiety is also (and perhaps therefore) an age of lack of communication. The issue of a free press, always vital, is today one of surpassing importance. Not only is there mechanical " jamming " between the two halves of the world, but the flow of ideas and the tradition of disinterested information are hampered as well by propaganda-caused psychical jamming. It is tragic that in that part of the world where the press is free, there should be so little understanding and appreciation of objective reporting. The man in the street, says Mr. Brucker, editor of an old and distinguished New England daily, still believes in a free press, but no longer with fire in his eye.

The author faces very honestly the causes of public disenchantment with the press. He sketches in, in a topical way, the history of American journalism to correct the impression—so vehemently maintained by Mr. Ickes, for one—that today's press is one-sided and venal in the matter of political coverage. Along with many a serious student of the American press, he finds that although the American people seem to have " defeated " the press for the last five times at the presidential polls, the victory was actually over the editorial page and not at the expense of the news columns. The contention that the press is not free because it represents the interests of a small, ultra-conservative group is considerably bruited about these days, and for it Mr. Brucker reserves his heavy artillery. He shows pretty conclusively that the alternative to a press whose way is paid by advertising is one which will be inevitably under the control of a specialized interest; or, as journalism's semanticists would put it, the result will be an " organ " (like the late PM, for example) and not a newspaper. The TVA " yardstick " concept, Mr. Brucker is convinced, cannot be applied to journalism; a federally or even municipally subsidized newspaper simply cannot be counted upon as a watch dog of the public interest.

In the integrity of the American press as a corrector of public political morals Mr. Brucker has a sound case to argue, and he can not be blamed for making the most of it. But the press is a conveyor of entertainment (to use his term) as well as of information. Here the record of the American

press has been anything but distinguished; it has been guilty of appalling taste and, not infrequently, offense to public morals. Mr. Brucker seems to feel that for the sake of untrammelled information we must accept without much question whatever the press chooses to provide by way of entertainment. Of the informational press as an over-simplifying, "popularizing" agent too little is made in these pages. The author himself is at times an example of the popular mind, particularly so in the use of such cliches as "shackles of the Church" and "Anglo-Saxon liberalism." *Freedom of Information* is adequate and informative in its survey of the present healthy though embattled condition of our press, but it lacks the precisions necessary for viewing its subject in its essential relationships.

The American Political Tradition and the Men Who Made It. By Richard Hofstadter. New York: Knopf, 1948. Pp. 407, with index and bibliographical essay. $4.00.

Much serious discussion of the American ideal, and many glib references to the American tradition might finally be reduced to open admission that the ideal and the tradition are vague, elusive, perhaps non-existent. In an effort to determine the outlines of this tradition—if it exists, and to fix its sphere of operations in the political order, Richard Hofstadter has written one of the clearest, most delightful combinations of history and political theory to appear in American literature. No limitations of time are added, and no apologies will be made for calling this literature; the work should stand as a classic exposition, and as an intensive investigation of this particular problem, without any fear of comparisons from any period. That the promise of the title is developed through the use of twelve biographies is a tribute to the author's insight, and a brilliant exemplification of his theme, rather than one of the weaknesses of the book, as superficial consideration might suggest.

Hofstadter explains, in his introduction, that Americans have recently become increasingly interested in history. This interest has thus far displayed itself particularly in the matter of appreciative accounts of the past, rather than of critical analysis. The present volume, according to its author's intention, is an attempt to assess the value of the historical contributions of our great men; the book is to be in no sense a hero-worshipping one. In fact, it is not a series of eulogies, and it does more than evaluate the contributions of many of our great men. The additional work is accomplished so subtly, however, that it is only when the entire volume has been read that one begins to appreciate its excellences.

The arrangement of the biographical portraits which comprise the book is chronological, with the Founding Fathers coming first, followed by Thomas Jefferson; then Jackson, Calhoun, Lincoln, Wendell Phillips, Cleve-

land, Bryan, Wilson, Hoover, and both Roosevelts appear in their proper order. Some objection might be made to the inclusion of so many presidents, if it were not for the manner in which Hofstadter has shown that each of the men he includes had definite political theories, and either voiced or applied them as frequently as occasions offered themselves. What is of even greater interest in the choice of portrait-subjects is the inclusion of the non-presidents: Calhoun, Phillips, and Bryan. The first is not a surprising choice, but the other two have been so thoroughly belittled in recent years that only a courageous author would dare attempt rehabilitation in a work such as this. The happiest feature of this attempt is that it has resulted so well, and that a new estimate of all three of these non-executives will have to be considered in new lights, and with new emphasis from now on.

It would indeed be difficult to determine which one of these sketches is most worthy of praise. The very choices of subtitles indicate considerable penetration, as well as the same felicity of style which is the *cachet* of the whole volume. To refer to Jefferson, the aristocrat, as democrat is not too surprising, but to find Calhoun called the Marx of the master class, Bryan, the democrat, as revivalist, and Franklin Roosevelt, the patrician, as opportunist, is to be presented with some really thought-provoking characterizations.

The promise of these epithets is amply fulfilled, and the temptation to quote at length in illustration of this statement is almost irresistible. To say that " Calhoun had a touching faith in his ability to catch life in logic. . . . he had no culture himself, only a quick and muscular mode of thought," is one such example. Lincoln " had had his ambitions and fulfilled them, and met heartache in his triumph," is another, while of Wendell Phillips the writer observes that he had, for as long as anyone in his own lifetime could remember, " been a thorn in the side of complacency." Chapters ended or highlighted in this fashion do a tremendous service to any reader looking for new and more profound evaluations of American leaders.

This profundity never becomes oppressive, however. Quotations in a much lighter vein might be mentioned: Conkling " was voluptuously abandoned to his own egotism "; Bryan's " heart was filled with simple emotions, but his mind was stocked with simple ideas "; Theodore Roosevelt's success came from his variety and exuberance, but " it should be remembered also that his talents as a comedian were by no means slight." Possibly the best description in one sentence of any of these men is that also applied by Hofstadter to T. R.: " The straddle was built like functional furniture into his thinking."

Both these sets of quotations will serve to show much of the appeal of the volume, but they must fail in exemplifying fully its merits. Complete objectivity in an historical treatment is unattainable and undesirable, but

so far as historical objectivity may be reached, this author has reached it. Each of the sketches shows the defects and virtues of the subject, but in each case there is sufficient understanding and compassion to make a truly three-dimensional presentation. Judged solely as a book of biographical portraits, this volume is a real contribution.

But as to living up to its title, many comments are more reserved. The general opinion seems to be that this should more properly have been labelled "Biographical Sketches," or something of the kind. Actually, however, what Hofstadter has done very cleverly—and this seems to be his most solid contribution as well—is to show that in every age since that of the Constitutional Convention, the American ideal has been what some leader said it was. Every one of the men chosen for discussion, and every one was admittedly a leader, formulated the American ideal as he understood it and then presented it to the people. It is interesting to note, also, that in each case the leader was careful to take half-formulated rags and tags of popular thought to assist him. This book, therefore, shows with pitiless clarity that we have, in fact, no consistent political tradition, and that what the men have made has been what suited their immediate purposes. If for no other reason than to appreciate this lack of a truly American tradition and ideal, this book deserves to be read and discussed. Its merits over and above this recommendation will cause it to remain in circulation, but its greatest contribution must be made to those who can appreciate at once the tragedy of a traditionless nation, and the necessity of supplying a sound tradition.

A Chilmark Miscellany. By Van Wyck Brooks. New York: E. P. Dutton & Company, 1948. Pp. 315. $4.00.

The Times of Melville and Whitman. By Van Wyck Brooks. New York: E. P. Dutton & Company, 1947. Pp. 489. $5.00.

The publication of *A Chilmark Miscellany* is formal notification that Van Wyck Brooks has become an institution, even to Van Wyck Brooks. In this reverently hand-picked anthology—the title is significantly derived from the name of the author's estate—we have some fifty pages of aphoristic paragraphs from *Opinions of Oliver Allston*, selections of sensitively conveyed *milieu* from such books as the Pulitzer Prize winner *The Flowering of New England* and longish excerpts from that volume and other books under the headings "Characters" and "Sketches." Perhaps even more interesting than what Mr. Brooks has done to American literature through introspection in a metaphorical cork-lined room is the abundant and critically related evidence of what our literature has done to Mr. Brooks.

Whitman's thesis that "the United States is the greatest poem" has

long served as backdrop for Mr. Brooks' critical theory. To clothe it, he absorbed from Emerson the gnomic quality of writing lapidary sentences (which often refuse to organize themselves into paragraphs); from Henry James he seems to have acquired sensibility—the test of taste— and a feeling for character; and Henry Adams proffered the fatal gifts of anecdotage and the response of ambivalence. From minute insights, preceptions of landscape tumbling in profusion, and an appreciation of idiosyncrasy so beguiling that he is unable to distinguish a major author from a minor one, Mr. Brooks has, these many years, attempted a climate of criticism. Theory he has none. His work has been a flight from " abstract discussions," to the point that he himself arrives at what he calls the Connecticut mind, one incapable of generalizing and given over to crotchets.

The Times of Melville and Whitman, a volume in the complete literary history Mr. Brooks has been pursuing for the past several years, displays his method of sensibility and impressionism as it occurs in a large framework. A richly figured memory-book, this volume treats of the literary generation of the period from 1850 to 1880. The only author of genuine stature in addition to the two mentioned in the title is Mark Twain. Most of the others are writers " we all remember as forgotten." Their recall in a pattern motivated by the technique of association of ideas makes for a tapestry of vivid squares and corners, yet one largely lacking in design. It is as though George Apley had taken to recording literature; all good fellows are remembered with affection, characterized by an anecdote which often has nothing to do with their literary production, and then whisked away. With writers of stature, the method is more successful, or rather it is forgotten. Mr. Brooks has some good things to say about Mark Twain's contribution of " ignorance " rather than innocence, and of Melville's stark and gigantic amateurism. His treatment of Whitman has been bitterly assailed in the quarterlies as timid and myopic. Whitman he will not admit into the stream of his consciousness; he feels a something too determinedly protean.

Perhaps the most disturbing characteristic of Mr. Brooks' critical work—to be crowned by a volume on the years 1885 to 1916—is his practice of elusiveness. Oliver Allston, the fictitious literary friend whose literary remains and opinions he presents in a lengthy and ambiguous book, is merely the most palpable of his disguises. The indefinite pronoun " one " is the chief offender: it is used now to indicate a contemporary of the author being discussed, now Mr. Brooks, now the reader of his book. Symptomatic of the basic flaws of impressionistic sensibility, this shying away from a look at problems (rather than persons), is typical of those who represent what Yvor Winters has called " the dissolving mind." For when an issue is about to be joined, Mr. Brooks turns away to say, with Henry Adams, " Sir, I am a tourist."

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